THE FORTY-THIRD YEAR.

THE

Companion to the Almanac;

OR,

YEAR-BOOK

OF

GENERAL INFORMATION

FOR THE YEAR OF OUR LORD

1870.

CONTENTS.

ON THE TOTAL ECLIPSE OF THE SUN OF AUGUST 17–18, 1868. By *Edwin Dunkin.*
SELF-IMPOSED TAXATION. By *Samuel Smiles.*
ROYAL COMMISSION ON WATER SUPPLY. By *Arthur Locker.*
PROGRESS OF AUSTRALIAN NATIVE INDUSTRIES. By *John Plummer.*
THE NATIONAL GALLERY. By *James Thorne.*
THE GREAT SUEZ CANAL. By *George Dodd.*
ARCHITECTURE AND PUBLIC IMPROVEMENTS, 1869. By *James Thorne.*
NOTES ON CO-OPERATION ABROAD. By *William E. A. Axon.*

ABSTRACTS OF IMPORTANT PUBLIC ACTS. | ABSTRACTS OF PARLIAMENTARY DOCUMENTS.
CLASSIFIED SUMMARY OF ACTS. | CHRONICLE OF EVENTS AND OCCURRENCES.

NECROLOGICAL TABLE OF DISTINGUISHED MEN AND WOMEN WHO DIED IN 1868-69.

LONDON:
PRINTED FOR

THE COMPANY OF STATIONERS,

AND SOLD BY J. GREENHILL, AT THEIR HALL, LUDGATE HILL.

Price Two Shillings and Sixpence;
Or, with the "British Almanac," Bound in Cloth, Four Shillings.

THE FORTY-THIRD YEAR.

Companion to the Almanac;

OR,

YEAR-BOOK

OF

GENERAL INFORMATION

FOR

1870.

PART I.

GENERAL INFORMATION ON SUBJECTS OF MATHEMATICS, NATURAL PHILOSOPHY, ARCHITECTURE, GEOGRAPHY, FINE ARTS, AND POLITICAL ECONOMY.

PART II.

LEGISLATION, STATISTICS, AND CHRONICLE OF 1868-69.

LONDON:

PRINTED FOR

THE COMPANY OF STATIONERS,

AND SOLD BY J. GREENHILL, AT THEIR HALL, LUDGATE HILL.

PRICE TWO SHILLINGS AND SIXPENCE; OR, FOUR SHILLINGS BOUND WITH THE BRITISH ALMANAC.

CONTENTS.

PART I.

GENERAL INFORMATION ON SUBJECTS OF MATHEMATICS, NATURAL PHILOSOPHY, ARCHITECTURE, GEOGRAPHY, FINE ARTS, AND POLITICAL ECONOMY.

	Page
On the Total Eclipse of the Sun of August 17–18, 1868. By EDWIN DUNKIN	3
Self-imposed Taxation. By SAMUEL SMILES	27
Royal Commission on Water Supply. By ARTHUR LOCKER	41
Progress of Australian Native Industries. By JOHN PLUMMER	61
The National Gallery. By JAMES THORNE	87
The Great Suez Canal. By GEORGE DODD	105
Architecture and Public Improvements. By JAMES THORNE	128
Notes on Co-operation Abroad. By WM. E. A. AXON	184

PART II.

LEGISLATION, STATISTICS, AND CHRONICLE OF 1868–69.

Classified Summary of Acts of Parliament :—

1. Army and Navy	206
2. Church and Education	207
3. Crime and Pauperism	208
4. Finance and Taxation	209
5. Law and Justice	211
6. Local Government	213
7. Public Works	215
8. Trade and Shipping	216
9. Miscellaneous Acts	218

Abstracts of Important Acts of Parliament (in the same order as "Classified Summary of Acts of Parliament") 220

Abstracts of Parliamentary and other Official Documents :—

1. Finance and Taxation	248
2. Currency	251
3. Trade and Industry	252
4. Agriculture	260
5. Population	262
6. Pauperism	263
7. Crime	266
8. Public Health	269
9. Education	270
10. Social Economy	272
11. Emigration	273

Chronicle of Events and Occurrences (1868–69) 275

Necrological Table (1868–69) 285

INDEX 288

BRITISH MUSEUM

COMPANION TO THE ALMANAC

FOR

1870.

PART I.

GENERAL INFORMATION ON SUBJECTS OF MATHEMATICS, NATURAL PHILOSOPHY, ARCHITECTURE, GEOGRAPHY, FINE ARTS, AND POLITICAL ECONOMY.

ON THE TOTAL ECLIPSE OF THE SUN OF AUGUST 17-18, 1868.

SECOND ARTICLE.

IN SOME RESPECTS, the scientific results obtained from the observations of the great eclipse of the sun of August, 1868, are more interesting and important than those gathered from any previous eclipse. In 1851 and 1860 the observers were, however, far more numerous, and the general appearances of the phenomena were more popularly described, than in the accounts of the eclipse of 1868. Many other peculiarities, exhibited only during a total obscuration of the sun, were also more attended to on former occasions. But the application of spectrum-analysis to the heavenly bodies has been carried on since 1860 with so much success, that it cannot be out of place to state that since that year a new branch of observing astronomy has been developed, principally through the skill and energy of a few of our amateur astronomers. In the eclipse of August, 1868, the chief observers confined their attention, therefore, to the analysis of the light of the prominences; and it must be acknowledged by all that the results of the extraordinary spectroscopic observations of Major (now Lieut.-Col.) Tennant, M. Rayet, Lieut. Herschel, and M. Janssen (especially those of the last-mentioned and renowned physicist), have opened up to us quite a new field of inquiry into the physical constitution of the solar photosphere. The great eclipse of 1868 will thus be remembered, probably more than any of its predecessors, as the epoch when the curiously-formed rose-coloured protuberances, which have interested every eclipse-observer so much since the year 1842, were clearly and satisfactorily seen in broad sunlight without the assistance of the moon as the intermediary body.

The general track of the central line of shadow, after leaving the Abyssinian shore, passed over the island of Perim, Aden, the Indian Peninsula, the Bay of Bengal, the Malay Peninsula, the Gulf of Siam, the northern part of Borneo, some of the islands in the Eastern Archi-

pelago, and the southern portion of New Guinea, finally disappearing at the New Hebrides, where the total obscuration commenced when the sun was in the horizon. From the western extremity of this long path to the eastern, skilled astronomical observers and amateurs were stationed, most of them being supplied with all the delicate instruments necessary for the observation of the peculiar phenomena which all were expecting to see. The list of observing-stations contained in the article in the last number of the *Companion to the Almanac* was prepared before any reliable information had been received from India, but it includes, nevertheless, all the principal European expeditions; the places of observation, however, require some modification. Several other observers, resident at the time in convenient localities, also availed themselves of the opportunity afforded them, and they have recorded many interesting particulars of the eclipse, as visible to the unassisted eye, or with the aid of small telescopes. Others again, although well prepared, entirely failed, owing to the cloudy state of the sky. Mr. Pogson, government astronomer at Madras, was one of those who were unfortunate in the choice of a station. Some special instruments had been forwarded from England to Mr. Pogson, who had made considerable preparations, as the principal local astronomer; but at the critical moment the sun and moon were completely hid from view. Mr. Chambers, of the Bombay Observatory, was equally unfortunate. At the principal stations, however, although the state of the sky gave great uneasiness to the observers during the time the eclipse was progressing, yet, in the interval of totality, the only European expedition whose members were seriously baffled by the clouds was the North German party at Moolwar. They, however, in a temporary break in the clouds, of a few seconds' duration, caught a good view of the principal prominence. The following table exhibits at a glance the names of the principal scientific stations where the eclipse was more or less observed, and the leading observing members of each party:—

Station at, or near, which the Observations were made.	Principal Observers.	Longitude, E. (Approximate).	Computed Duration of Totality on Central Line of Shadow.
		° ′	′ ″
Aden	Weiss, Oppolzer, Rziha	45 10	3 26
Aden	Vogel, Tiele, Fritsch, Zenker	45 10	3 26
Jamkandi	Herschel, Campbell	75 20	5 20
Beejapoor	Haig, Tanner, Laxuman	75 45	5 24
Moolwar	Spoerer, Tietjen, Engelmann	75 45	5 24
Guntoor	Tennant, Branfill, Phillips	80 27	5 47
Guntoor	Janssen, Rédier, Lefaucheur	80 27	5 47
Hua Tong	Stéphan, Tisserand, Rayet, Hatt	99 30	6 46
Barram Point, Borneo	Hennessy, Reed, Ray, Ellis	114 0	6 17
Mantawalu, Celebes	Oudemans, Ehule, Commÿs, Rovers	123 5	5 32

In describing the phenomena observed at the different stations, it will tend to a clearer conception of their peculiarities if we classify them into the following four divisions:—1. Rose-coloured protube-

rances, observed either with the spectroscope or with an ordinary telescope.—2. Photographic registers of different phases of the eclipse, and general remarks on the protuberances.—3. The Corona.—4. General appearances observed with the unassisted eye.

1. Rose-coloured Protuberances, observed either with the Spectroscope or through an ordinary Telescope.

Aden.—Commencing with the Austrian observers at Aden, it may be remarked that, during several days preceding the eclipse, the state of the sky was the same from day to day, the sun rising clouded and remaining obscured till about nine o'clock in the morning, when the clouds suddenly disappeared. About an hour after sunset, small feathery clouds generally began to form, which gradually assumed the character of cirrus and cirro-stratus, until the heavens were again covered with one dense mass of uniform cloud. As the total obscuration of the moon occurred at an early hour in the morning at Aden, this uniform daily state of the weather gave the observers of both parties a considerable amount of uneasiness. When they began their preparations, on the morning of August 18, nine-tenths of the sky was completely clouded. Dr. Weiss remarks: "We made preparations for the observations without much hope, but took courage somewhat when, towards six o'clock in the morning, some gaps appeared in the clouds near the sun. And indeed, in one of these, ten minutes before the beginning of totality, we caught sight, for some moments, of the sun's crescent, already very narrow; but not until five minutes before the long-expected moment of totality did it pass into a perfectly clear part of the sky. There it continued throughout the whole duration of totality, enabling us to carry out all the observations which we had planned."

The place of observation selected by both parties was Marshag Hill, an elevated spot with a lighthouse on the top, on the east side of the peninsula, about two English miles from Aden. The photographic apparatus of the North German party was set up a short distance from the station occupied by Dr. Weiss and his colleagues. These observers saw three protuberances, without including the rosy edge which, at the beginning and end of totality, was exhibited over extensive portions of the moon's limb. The edges of this sierra were surrounded by a bluish glory, diminishing in intensity until it was lost in the light of the corona. The first prominence seen by Dr. Weiss was very close to the point where the last ray of the sun disappeared, having somewhat the aspect of an agglomeration of protuberances of a very complicated structure. The second prominence, situated on the east limb of the dark moon, was of a most interesting character. It had a considerable elevation above the limb, its form being as nearly as possible like that of a bent finger, and about the eighth part of the sun's radius in length. The third prominence seen by Dr. Weiss was not visible until near the end of totality, when it was noticed as a small conical elevation in a nearly opposite direction to the first prominence observed. Dr. Oppolzer considers that the texture of the first prominence seemed to be of a decided flaky nature,

and this effect at once gave him the impression that the object was in some way dependent on the sun. Like Dr. Weiss, he also describes the shape of the large prominence as being in the form of a finger, inclined towards the east, and its structure apparently homogeneous. Both prominences were clearly detached from the ordinary photosphere. All were of a bright carmine tint, and their form was very clearly defined. The largest of the three prominences, and that which attracted the attention of every observer along the line of shadow, was visible during the whole of the totality, and was only lost from view by the interposition of some clouds about a minute after the reappearance of the sun. When the first ray of sunlight appeared, a red border was noticed by Dr. Oppolzer, at the last moment, separated from the moon's dark limb by an intensely luminous line, forming as it were a kind of bridge between the disc and the rose-coloured border.*

M. Rziha, an officer of the Imperial Austrian Marine, was employed during the total obscuration in making a series of spectroscopic observations, using an instrument by Kirchhoff, of the most simple construction, containing a single prism of flint-glass, and provided with a condensing lens before the slit, the light of the corona being projected on to the lens by means of a heliostadt. The principal object of this arrangement was to concentrate the feeble light emanating from the corona during the totality. M. Rziha does not appear to have seen the bright lines in the spectrum of the prominences noticed by all the spectroscopic observers in India and the Malay Peninsula. This can be accounted for from the fact that M. Rziha's attention was directed not so much to the prominences as to the general corona light near the moon's limb. The dark lines of the solar spectrum were visible up to the commencement of the total obscuration, when they disappeared instantly, leaving only a dull spectrum, but always clearly perceptible and continuous. Towards the end of the totality, when the hitherto partially-hid corona was quite obscured by light clouds, so that only the rosy light from the limb and the prominences entered the spectroscope, a singular change in the appearance of the spectrum was observed by M. Rziha. All the rays of the greatest refrangibility disappeared, and there remained only a series of red bands, separated by spaces more or less broad. As soon as the least trace of sunlight appeared, Fraünhofer's dark lines instantly became visible.

Dr. Oppolzer has recorded the mean time of Aden at the beginning and end of totality—that at the former being 18h. 29m. 30·0s., and at the latter 18h. 32m. 24·6s. The end of the eclipse was observed at 19h. 33m. 13·6s. by Dr. Oppolzer, and at 19h. 33m. 16·0s. by M. Rziha. The phenomenon known by the name of Baily's beads was seen by Dr. Oppolzer a second and a half before totality. It took the appearance of a row of pearls, but the cause was clearly owing to the inequalities on the limb of the moon. The angles of position and the altitude of the rose-coloured prominences were carefully measured by MM. Weiss and Oppolzer, as follows:—

* This rose-coloured border seen by Dr. Oppolzer was, without doubt, a portion of the coloured gaseous envelope surrounding the sun, termed the *chromosphere*, the existence of which has been so conclusively established by the spectroscopic observations of Mr. Lockyer and others.

Mean Time at Aden.	Observer.	Protuberance.	Angle of Position from N. towards E.	Altitude above Moon's Limb.
d. h. m. s.			°	′ ″
Aug. 17 18 29 30	Oppolzer . . .	1	138	0 50
29 40	Weiss	1	137	1 0
31 11	Oppolzer . . .	1	138	0 12
30 31	Oppolzer . . .	2	90	2 4
31 18	Weiss	2	77	2 0
31 48	Oppolzer . . .	2	93	1 52
31 58	Weiss	3	314	0 7

JAMKANDI.—One of the first communications received in Europe announcing the success of the spectroscopic observations, was that of Lieut. John Herschel, R.E., who, with Lieut. Campbell, was stationed at or near Jamkandi, the residence of a native gentleman who had previously made some offers of assistance. Lieut. Campbell selected his place of observation on a hill about 1½ mile from Jamkandi. The telescope used by Lieut. Herschel was one equatorially mounted by Cooke & Sons, of York, the object-glass being of five inches aperture and sixty-two inches of focal length. The clockwork, to which very great attention was paid in its construction, was also by Cooke. A spectroscope, consisting of a single flint-glass prism with a refracting angle of 60°, was constructed, under the supervision of Mr. Huggins, by Troughton & Simms, to be used with the telescope. Four direct-vision hand-spectroscopes, of the form designed by Mr. Huggins for the observations of the spectrum of meteors, were placed in the hands of Lieut. Herschel for distribution to those observers who were likely to be located on the day of the eclipse in different parts of the central line of shadow. One of them was intrusted to his colleague, Lieut. Campbell, who however, unfortunately, had no opportunity of using it; another to Capt. Haig, at Beejapoor; the third to Capt. C. G. Perrins, of the Peninsular and Oriental Company's Steamship Carnatic; and the fourth to Capt. Rennoldson, of the Rangoon, belonging to the same Company. Capt. Rennoldson's observations were generally satisfactory. Independently of some interesting and valuable sketches of the eclipse, he observed that the spectrum of the rose-coloured protuberances was discontinuous; and if a total failure, through clouds, had taken place at all the stations on shore, the observations as recorded by this officer would have been most valuable. Two other hand-spectroscopes in the possession of Lieut. Herschel were lent to Mr. Chambers, of the Bombay Observatory, who was stationed at Mongoli, about six miles east of Moolwar; but he was unable to use them, owing to the cloudy state of the sky.

We have already given, in last year's *Companion to the Almanac*, a general account of Lieut. Herschel's spectroscopic observations. In his more detailed report, addressed to the Council of the Royal Society, he enters more fully into the arrangements made to ensure success. At the commencement of total obscuration, the clouds had completely hid the moon, but not for any long period. While watching the motion of the clouds in the finder of the telescope, Lieut. Herschel

saw them gradually pass off, revealing first the upper limb with the corona, and afterwards the lower limb. Noticing immediately the large finger-like prominence, he hurried to the spectroscope, where a single glance was sufficient to decide that, instead of the solar spectrum, there were visible "three vivid lines—red, orange, blue; no others, and no trace of a continuous spectrum." The measurements of the positions of these bright lines, with reference to the principal dark lines of the solar spectrum, were made by Lieut. Herschel under a state of considerable nervous excitement, and are, consequently, not so accurate as he would have wished. Having succeeded, however, in measuring two of the bright lines to his own satisfaction, an attempt was made to fix the position of the blue line. "Here," observes Lieut. Herschel, "I was not so successful. The glimpses of light were rarer and feebler, the line itself growing shorter, and (what remained of it) further from the cross: I did, however, place the cross-wires in a position certainly very near the true one, and got a reading before the re-illumination of the field told me that the sun had reappeared on the other limb. I need not dwell on the feelings of distress and disappointment which I experienced on realizing the fact that the long-anticipated opportunity was gone, and, as it seemed to me then, *wasted*. I seemed to have failed entirely." The following numbers are the micrometer-readings of the relative positions of the solar lines, and of two of the bright lines seen by Lieut. Herschel:—

	C	D	*b*	F
Before Totality	1·91	2·96	4·58	5·64
	1·90	2·94	4·56	5·61
	1·93	2·98	4·60	5·65
	1·92	2·97	4·58	5·62
Bright lines .		[3·00]		[5·56]
After Totality	1·93	3·00	..	5·65

It is the opinion of Lieut. Herschel that there can be no question of the identity of the orange line with D, so far as his spectroscope was capable of establishing such identity. The position of the blue line does not appear, by the above readings, to be identical with the line F, being apparently of slightly less refrangibility. The position of the red line was not so accurately measured as the others, but Lieut. Herschel places it between the solar lines B and C, without hazarding any more definite opinion about it. Those who have not attempted to observe the telescopic eclipse phenomena can have little conception of the great excitement experienced, even by old observers, during the few minutes of the total obscuration. The writer had felt it very strongly at Christiania in 1851. So much has to cross the mind in so short an interval, that when the sunlight has returned, the observer naturally looks back on the phenomenon he has just witnessed as if it were all the result of a mere phantasy or dream. The remainder of the eclipse has no longer any charm for him, except it be to note the exact time of ending. "It is a fact not unworthy of notice," says Lieut. Herschel, "that in all the accounts of eclipses, written soon after the event, which I have read, the record hurries rapidly to a close after the sun has reappeared. The reason, no doubt, is that a reaction takes place after the excitement of witnessing the

actual eclipse, and phenomena which might be noticed after, quite as well as before, pass unregarded on that account. For my part, I was surprised to find how utterly indifferent I felt to the appearance of things when I came out of my observatory. I am almost ashamed to confess that I went straight to my tent, and tried to write down what I *had* seen, instead of going to the telescope to watch for what still might be seen. It never even occurred to me to remove the spectroscope, and use the fine telescope I had at my command."

Lieut. Campbell's observations during the totality consisted principally of experiments for the polarization of the light of the rose-coloured prominences and corona, especially of the latter. With the double-image prism he could not notice any difference of colour in the two images of the remarkable horn-like protuberance.

Beejapoor and Moolwar.—Capt. C. T. Haig, one of the staff of the Great Trigonometrical Survey of India, took up his position at Beejapoor, accompanied by Capt. Tanner and Mr. Kero Laxuman, Professor of Mathematics in the Deccan College. Mr. Hunter, of the Bombay Civil Service, and Dr. Keilhorn, of the Deccan College, were also present as non-professional observers. The party does not appear to have been supplied with very satisfactory instruments, although they were good of their kind. Capt. Haig's principal telescope was a small 6-inch transit theodolite, by Troughton & Simms; Capt. Tanner had an Everest theodolite by the same makers; while Mr. Kero Laxuman made his observations with an ordinary pedestal-telescope of 2¼ inches aperture, mounted temporarily as an equatorial. Capt. Haig, as we have already mentioned, had also one of the Royal Society's small hand-spectroscopes. The spot selected as the most favourable for the observations was on a large solid tower, called the Upari Burj, from which there is a good general view of the surrounding country.

The clouds, which proved to be the greatest source of anxiety at nearly every observing-station, were more particularly troublesome at Beejapoor and Moolwar. From seven in the morning till some time after the total phase was over, glimpses of the sun could only be obtained through the cirro-cumuli, which were floating at a considerable elevation above the surface of the earth. What was seen of the rose-coloured protuberances was therefore affected by the variable density of the clouds as they passed over the dark moon. At the beginning of the total obscuration, the exact time of which could only be guessed at, a lower stratum of cloud, approaching the character of nimbi, was being carried over rapidly by the high wind. Capt. Haig remarks: "We were all lamenting our misfortune in not being able to observe the eclipse, and had given up all hope of witnessing the phenomena we had come so far to see, and Capt. Tanner had just noticed the faint appearance of light in the west, when, contrary to all expectation, and to our intense satisfaction, a sudden opening in the nimbi showed us the eclipse through the cirro-cumuli. We were each at our telescopes in an instant. I immediately saw, through the naked telescope of the small theodolite, that red flames were visible, and at once pointed the spectroscope, using the theodolite-telescope as a rest. Very fortunately, I directed the spectroscope with its

'refracting edge' tangent to the moon, where two red flames were protruding, separated from each other by a small interval; so that their spectra, which were identical, were extended over the dark background of the moon's disc, and stood out in most marked and brilliant contrast with the feeble but continuous spectrum of the corona; and in their spectrum were two broad bright bands quite sharply defined—one rose-madder, and the other bright-golden in colour. . . . What struck me as being very remarkable was the circumstance, that though the light of the red flames was to the naked eye so feeble as to be outshone to extinction by that of the corona, nevertheless, when viewed with the spectroscope, the spectrum of the corona was very weak, and that of the flames remarkably brilliant. On the first glimpse of the eclipse, before looking through the telescope, the corona appeared so bright, that it gave me the momentary impression (as it did to Capt. Tanner) of its being an annular eclipse." Capt. Tanner at first saw three protuberances—one the horn-like prominence seen by all the observers, and two close together of smaller size. "They were of a rose-madder colour, and were decidedly more like flames than anything else, not only in their general appearance and colour, but by their being composed of smaller tongues of flame, parallel (or nearly so) to the general axis of the flame, so that they had a streaky appearance and a ragged edge." When the sun was more than usually obscured by the clouds, Capt. Tanner imagined, at the first glance, that the prominences were homogeneous and had hard edges; but as soon as the clouds partially cleared off, this idea was at once dispelled. Mr. Laxuman records the height of the large protuberance to be about two minutes of arc, and the width about half a minute. He could see this prominence, which to him appeared of a dark red colour, at least two minutes after the end of totality, and he believes that, had there been no clouds, it would have been visible much longer.

At Moolwar, where the North German party had mounted their instruments, of which there was an ample supply of the best construction brought from Berlin, very little of the eclipse could be observed. During a partial break in the clouds, of a few seconds' duration, in the middle of the totality, the observers (MM. Spoerer, Tietjen, and Engelmann) recognized the large protuberance, and succeeded in making some rapid micrometrical readings of its altitude, which was determined by them to be about three minutes of arc. With the exception of this hurried glimpse of the principal protuberance, the North German expedition, unfortunately, saw nothing important to repay them for the labour and inconvenience of so long a journey in the hot season of the year.

Guntoor.—The successful observations made at this station, both by Major Tennant and by M. Janssen, have been undoubtedly due to the energetic, active, and untiring zeal of these gentlemen: to the first, more especially, for the six photographic representations of the eclipse, which have turned out to be a most valuable series of pictures; and to the second, for the originality of thought exhibited in the conception of a method for viewing the presence of the rose-coloured protuberances without the interposition of the moon in a

total solar eclipse. This idea first entered into the mind of M. Janssen during the progress of the total phase.

To Major Tennant, astronomical science is also indebted for having first called the attention of European astronomers to the very peculiarly favourable conditions which were presented by this eclipse. Taking advantage of his leave of absence from India, he employed a considerable portion of his time by promoting the expedition of which he subsequently took charge. In the preliminary arrangements, Major Tennant was ably assisted by the advice of a Committee of the Royal Astronomical Society, especially by the Astronomer Royal and Mr. De La Rue, both of whom had great experience, obtained in former eclipses. The task undertaken by Major Tennant and his party was a very comprehensive one, and entailed upon the superintendent almost too great a responsibility. The plan adopted was to determine previously to the eclipse the geographical position of the observing-station. This was done satisfactorily, although there were very few available days, owing to the continuous cloudy state of the sky. During the totality it was intended to make a series of spectroscopic observations of the rose-coloured protuberances, a duty which was undertaken by Major Tennant himself. The telescope used was one which formerly belonged to the late Mr. Sheepshanks, but now to the Royal Astronomical Society. Its object-glass is of 4·6 inches aperture, and about 5½ feet focal length. This telescope was originally mounted equatorially, suitable for use in the latitude of Great Britain; but to make it available for India, the mounting had to be altered to suit the more southern stations. The spectroscope employed with the telescope was constructed by Messrs. Troughton & Simms.

Notwithstanding a few mishaps, including some difficulties discovered in the going of the driving-clock just at the critical moment of totality, Major Tennant was enabled to satisfy himself in most of the subjects which he had planned for observation. In the first place, he noticed that the spectrum given by the light of the corona was decidedly continuous; and, secondly, that the spectrum of the rose-coloured protuberances was exhibited as certain bright lines of definite refrangibility, which at once explained that these curious appendages are composed of gaseous matter rendered luminous on account of its very high temperature. In the spectrum of the large hornlike protuberance, Major Tennant observed a beautiful line in the red, another in the orange, and one very bright in the green, which appeared formed of several. He also saw, with difficulty, a line near Fraünhofer's F. He says that "the red and yellow lines were evidently C and D; the reading of the bright line coincides with that of the brightest line in *b*. The line near to F was, in all probability, F itself; E, he says, was certainly not seen by him, and that, as regards the line in the blue, it was useless from his data to speculate upon it." * This prominence, which has been designated the "Great Horn," occupied the whole personal attention of Major Tennant. Its altitude at Guntoor was found to reach 3′ 20″, being considerably greater than the celebrated boomerang prominence universally ob-

* "Astronomical Society's Monthly Notices: Council's Report," vol. xxix. p. 147.

served during the eclipse of 1851. Some peculiarities in its form, revealed by the photographic pictures, will be referred to presently.

Captain Branfill joined Major Tennant some days before the eclipse, and immediately commenced observations with the polariscope for practice, so as to familiarize himself with the instrument before the day of the eclipse. The instrument to which the polariscope was attached was formerly used at the Royal Observatory as one of the collimators of the transit-circle. It was not furnished with a driving-clock, but it was mounted, so as to give it an equatorial movement, in order that it could easily be made to follow the apparent motion of the sun. The apparatus was so constructed that several combinations could be substituted one for the other, without much loss of time. Captain Branfill's observations were perfectly successful, and he has proved that the rose-coloured protuberances—or, rather, the "Great Horn," which was chiefly observed—gave no indications of their light being polarized. Every combination, however, showed that the light of the corona was strongly polarized everywhere in a plane passing through the centre of the sun.

M. Janssen and his party were also located at Guntoor. The class of observation recommended to M. Janssen by the Bureau des Longitudes and the Académie des Sciences was the special study of the spectrum of the light emanating from the circumsolar regions, but more particularly of the rose-coloured protuberances and the corona. The reputation of M. Janssen as a physicist is so universal, that he was selected without hesitation by the two French scientific bodies to carry out their views, the expense of the mission being defrayed by the Minister of Public Instruction. Success has attended M. Janssen at every step, the results of his observations having surpassed all expectations. The Académie des Sciences has shown its appreciation of his labours by presenting him the Lalande astronomical prize for 1869, for the most successful discovery in astronomy during the preceding year.

In choosing a station, M. Janssen went first to Masulipatam, on the Bay of Bengal, near the central line of shadow. To avoid, however, the marine fogs, which are very frequent at Masulipatam, he resolved to go to Guntoor, an Indian city, situated about an equal distance between the most elevated neighbouring districts and the sea. Another reason which assisted M. Janssen to decide on fixing his station at Guntoor, was in consequence of the residence there of the descendants of several French families, who during the last century settled in India. The spot selected by M. Janssen was a large terrace on the premises of M. Jules Lefaucheur, who assisted him in the observations. M. Rédier, a young naval officer, was attached to M. Janssen as assistant. The party was well furnished with instruments, among which some of the object-glasses were of six inches aperture; all the telescopes being mounted, in a similar manner, with a simple clockwork for following the apparent motion of the sun. Each of the telescopes was furnished with a finder from 2 to $2\frac{3}{4}$ inches aperture. Special micrometers were provided to measure rapidly the angle of position and altitude of the prominences. Spectroscopes, of different optical power, were adapted to the large telescopes, to allow

for any variability in the phenomena which might require either a higher or lower power. Independently of all these instruments, M. Janssen brought from Europe a valuable collection of sensitive thermometers, portable telescopes, hygrometers, barometers, &c., which were placed in the hands of different observers.

The weather at Guntoor, like that in Western India, was very unfavourable on days preceding August 18. The rain, which had been nearly continuous for some time, was considered by the inhabitants as exceptional. The morning of the day of the eclipse opened more favourably, the sun being visible at rising through a stratum of clouds. Gradually, as the morning advanced, the clouds disappeared, and at the commencement of the eclipse the sun was shining with full brilliancy, and continued so, with the exception of the time when a few light vapours were passing over, until the end of totality. "The decisive instant was approaching," remarks M. Janssen, "and we were waiting for it with a certain amount of anxiety; this anxiety, however, took nothing away from our faculties, but rather improved them; moreover, it was fully justified, both by the grandeur of the phenomenon which nature had prepared for us, and by the feeling that the fruits of long preparation and a distant voyage depended entirely on an observation of only a few minutes' duration."

As soon as the solar disc was reduced to a narrow luminous line or crescent, M. Janssen placed the slits of the spectroscopes on that portion of the lunar limb which was about to extinguish the last solar rays, so that the slits might be opposite the lower regions of the solar photosphere, when the two discs would be tangential to each other. As soon as the totality commenced, the appearance of the spectrum changed in the most remarkable manner. Instead of the usual solar spectrum, which disappeared immediately with the last solar ray, two spectra were visible, formed of five or six very bright lines—red, yellow, green, blue, and violet. These spectra corresponded with each other, line with line, and were separated by an obscure space, in which no sensible luminous line could be perceived. These bright lines were observed by M. Janssen before he was really aware of the form of the objects whose spectra were visible. Glancing, therefore, into the finder, he observed that two magnificent protuberances—one to the right and the other to the left of the point where the first contact of limbs took place—were shining with great distinctness. That to the left appeared more than three minutes of arc in height, and is the same as the "Great Horn" seen by Major Tennant and other observers. M. Janssen remarks that it recalled to his mind a flame driven out of the interstices of the fuel in a forge-fire by the force of the air from the bellows. The protuberance on the western limb appeared like a mass of snowy mountains resting on the limb of the moon, lightened up by the setting sun.

The few minutes of observation, which M. Janssen employed principally in observing the positions of the bright lines, were sufficient to convince him that the rose-coloured protuberances were of a gaseous nature; that the similarity of the spectra of the two visible in his spectroscope proved that they were chemically composed of the same gas; and that the red and blue lines were identical with the

lines c and F of the solar spectrum, indicating, as the principal constituent, the presence of hydrogen gas.

We now come to the most extraordinary, as well as the most important, observations made at any station, or by any observer, in connection with the total solar eclipse of 1868. Although similar results were obtained independently, about two months afterwards, by Mr. Norman Lockyer, whose zeal and observing skill cannot be too highly appreciated; yet the first observer of the existence and form of the rose-coloured solar appendages, in the absence of an eclipse, must unreservedly be connected with the name of M. Janssen. The latter renowned physicist was not, however, the first to conceive the possibility of observing, with the spectroscope, the rose-coloured protuberances in sunlight; for, in 1866, both Mr. Lockyer and Mr. Stone made some systematic observations for this purpose, but owing to the small dispersive power of the spectroscopes employed (since ascertained to have been incapable of showing the bright lines), the results were negative ones. It was during the total obscuration of the sun on August 18, that M. Janssen was struck with the brilliancy of the bright lines in the spectrum of the protuberances; and a thought crossed his mind that after the totality, knowing the exact position of the horned prominence, he would continue the observations with the object of determining whether the bright lines could still be observed. Unfortunately the sun was soon obscured by clouds, after the totality, and no opportunity arose again during the remainder of the day. M. Janssen was not, however, conquered. During the evening and night he was occupied in devising a method of observation, and arranging the mode of its execution. Rising before sunrise on the morning of August 19, he was fully prepared by the time that the sun was free from the vapours near the horizon. By means of the finder of his principal telescope, M. Janssen placed the slit of the spectroscope as near as possible on that portion of the sun's limb where the large protuberance was noticed. As the slit was placed partly on the solar disc, and partly exterior to it, two spectra ought to be exhibited—one that of the sun, the other that of the prominences. But the brilliancy of the solar spectrum caused some difficulty; and it was necessary, by turning it, to hide in some measure the yellow, green, and blue portions of the spectrum. M. Janssen's attention was chiefly directed to the line c, which, dark in the solar spectrum, and bright in that of the prominence, is situated in a less luminous portion of the spectrum, and was supposed, therefore, to be more easily perceptible than any other line. "I was," remarks M. Janssen, "for some time studying the protuberantial region on the western limb of the sun, when I perceived suddenly a small red line, from one to two minutes in height, forming a rigorous prolonging of the dark line c of the solar spectrum. By moving the slit of the spectroscope, so as to sweep methodically over the region I was examining, this line still remained, but it underwent considerable modifications in its length as well as in its brightness. This fact showed a great variability in the height and in the luminous power of different parts of the protuberance."

M. Janssen repeated the observations at short intervals, and always

with the same result. The distinctness of the bright line was so palpable, that M. Janssen's assistant, M. Rédier, when his attention was drawn to it, saw it at once. Shortly afterwards a bright line at F was also clearly seen. On the afternoon of the same day, M. Janssen renewed his observations with increased success. The bright lines were seen as before, but there had been evidently considerable changes in the distribution of the protuberantial matter. Instead of the lines being continuous, as in the morning, they were now sometimes broken up into isolated portions, which no arrangement of the slit could reunite to the principal line. This was considered by M. Janssen to indicate a recent formation of some clouds or matter of a different chemical composition to the prominences. Some bright lines were still seen on the limb where the large protuberance was observed, but their length and distribution showed that it had undergone a complete change since the preceding day. On every favourable opportunity till September 4, M. Janssen continued his spectroscopic observations, and always succeeded in observing, more or less, the gaseous matter composing the rose-coloured prominences and the rosy sierra which is often seen near the moon's limb in total eclipses. On September 4, under more than ordinarily favourable circumstances, the protuberances were not only clearly visible, but they were observed to form and dissipate in a very short space of time. On this occasion (9.50 A.M.) rosy matter extended for thirty degrees on the sun's limb, from ten degrees east of the vertical diameter to twenty degrees on the west. Towards the extremity of the western portion, a considerable prominence was detected about 1½ degree in height above the sun's limb. A portion of this prominence extended on to the solar disk, and was altogether fully two minutes long, one minute broad. On examination an hour afterwards, the prominence was more elevated, but it had taken a globular form. In ten minutes (about 11 A.M.) this enormous gaseous globe was lengthened out in a direction perpendicular to that when first observed, at 9.50 A.M. A small mass of matter, detached apparently from the lower portion of the prominence, was suspended between it and the sun's limb. It was the intention of M. Janssen to keep his eye on this variable prominence for some hours, but clouds soon gathered, and prevented the sun being seen during the remainder of the day. The final results which have been deduced from M. Janssen's spectroscopic observations in India have been recorded by him as follows:—

"1. That the luminous protuberances observed during total eclipses of the sun belong incontestably to the circumsolar regions.

"2. That these bodies are formed of incandescent hydrogen, and that this is the predominating gas, if it does not form exclusively the whole, of their composition.

"3. That these circumsolar bodies are the seats of rapid movements, of which no terrestrial phenomena can give an idea; of masses of matter whose volume is many hundred times greater than that of the earth, dissipating and changing their form completely in the space of a few minutes."

HUA TONG.—The French expedition, under the superintendence of M. Stéphan, after some consideration, selected a spot near the

eastern shore of the Malay Peninsula, called Hua Tong, or Wha Tonne. M. Stéphan observed the phenomena with the largest telescope, M. Tisserand with an equatorial; M. Rayet with a reflecting telescope with a speculum or silvered mirror of eight inches diameter; M. Chabirand with a hand-spectroscope; M. Hatt with a small telescope mounted as an altazimuth, and during the totality with a hand-spectroscope. The observers, as at most of the other stations, were troubled with the clouds in the earlier phases of the eclipse, for it was impossible to note the time of the first contact; and to all appearances a heavy fall of rain was threatening, as it falls only in these countries during the period of the south-west monsoon. In fact, rain had already commenced near Hua Wan, a few miles from the observing-station. Twenty minutes before totality, the clouds, however, began to break, and those in and near the zenith gradually dissipated; so that a few minutes before the total obscuration the narrow crescent of the sun was seen shining in a perfectly clear portion of the sky, which enabled the phenomena to be observed without any fear of failure so far as regards the weather.

The totality had scarcely commenced when the protuberances and the corona appeared with an almost marvellous distinctness, even to the unassisted eye. M. Stéphan noticed four protuberances, one of which was of course the Great Horn, the estimated altitude being about one-tenth part of the diameter of the sun. Their colour was coral-red slightly tinted with violet. All the prominences were sensibly attached to the limb of the moon, and not floating at some distance from it. M. Stéphan made several micrometrical measurements of the large protuberance and two smaller ones. M. Tisserand also made a good measure of the altitude of the large protuberance with a position-micrometer.

The principal spectroscopic observations were made by M. Rayet by a direct-vision spectroscope mounted on the 8-inch silvered glass equatorial. The spectroscope was formed of three prisms of great dispersive power. As soon as the totality commenced, M. Rayet placed the slit on the image of the large protuberance. "I saw," he remarks, "immediately a series of nine bright lines, which, according to their disposition in the field of view, their relative distance from each other, their colour, and finally by their general appearance, I considered to be identical with the principal lines of the solar spectrum B, D, E, *b*, an unknown line, and two lines of the group F, G."* From these observations, M. Rayet at once concluded that the protuberances were jets of incandescent gaseous matter—the visible flames, in fact, of some extremely powerful chemical action. M. Rayet noticed that the lines D, E, and F were prolonged beyond their average length by a very faint luminous line. He concludes from this that a certain portion of the incandescent gaseous matter forming the protuberance is spread out into the solar atmosphere beyond the extreme

* During the total eclipse of the sun of August 7, 1869, which was observed in the United States under the most favourable conditions possible, Professor Winlock, of the Harvard Observatory, perceived *eleven* bright lines in the spectrum of one of the rose-coloured protuberances, or two in excess of those seen by M. Rayet. This proves beyond doubt that these incandescent flames contain the vapours of other substances or gases besides hydrogen, although the latter may be the principal element of their composition.

limit of the prominence visible to the eye. The spectrum of one of the smaller protuberances was also examined, when similar bright lines were observed, excepting that only one line in the violet was seen.

The first King of Siam—who had for some years been greatly interested in astronomical phenomena, and who was an honorary member of the Royal Astronomical Society—came with his Court to the neighbourhood of the French observing-station, for the purpose of witnessing the eclipse under the most favourable circumstances. He resided temporarily at Hua Wan. On his return to Siam, the King was attacked with fever, generated most probably by the malaria then prevalent along the Malay coast, from which he died after a short illness, being the only astronomical victim to the unhealthiness of the climate. Several of the French party became ill from the same kind of fever, including M. Stéphan himself and M. Rayet, but they all recovered during the return-voyage.

Barram Point, Borneo.—The observations at this station were not made by astronomers, but some of the details are interesting. The observers were Mr. J. Pope Hennessy, Governor of Labuan, Staff-Commander Reed, Lieutenants Ray and Ellis. Referring to the great horned protuberance, Mr. Hennessy remarks that "it seemed to be a tower of rose-coloured clouds. The colour was most beautiful —more beautiful than any rose-colour I ever saw; indeed, I know of no natural object or colour to which it can be, with justice, compared. Though one has to describe it as rose-coloured, yet, in truth, it was very different from any colour or tint I ever saw before." This remarkable prominence was easily seen, without the assistance of a telescope, as a little tower of white light projected on the corona, standing on the dark edge of the moon. Its form was very similar to that of a goat's horn. Mr. Hennessy noticed that at the commencement of totality the narrow luminous crescent of the sun was broken up into numerous points of light. As soon as the last ray had disappeared, he and the other members saw instantly the sudden formation of the corona, and at the same instant the rose-coloured protuberances. He estimates the large horn to be about one-sixth of the sun's diameter in length, but as this does not depend upon micrometrical measurement, the height is probably somewhat exaggerated.

Celebes Island.—Professor Oudemans, of Batavia, observed the eclipse at Mantawalu, in the northern arm of the island of Celebes. He was accompanied by several young officers of the Dutch navy. The weather was favourable during the totality. Four prominences were seen by M. Oudemans and Lieut. Ehule, and three by Lieuts. Commÿs and Rovers. At Gorontalo, a few miles from M. Oudemans' station, two of the party (Lieut. Schuylenburg and M. Riedel) noticed respectively three and two prominences. The large protuberance was seen by all the observers, but the positions of the smaller ones in the separate diagrams differ a little. The attention of M. Oudemans seems to have been directed principally to time observations, and to a comparison of the observed times with those deduced from the Solar and Lunar Tables. He has also determined with considerable care the longitude of Mantawalu and Gorontalo.

2. Photographic Registers of Different Phases of the Eclipse during Totality, and General Remarks on the Protuberances.

The only European expeditions furnished with a complete series of photographic apparatus were those of Aden and Guntoor—the former being the North German party, and the latter the Royal Astronomical Society's expedition, under the care of Major Tennant. Both have succeeded far above our first expectations, and have obtained several interesting pictorial records of the protuberances, some of which could not have been perceived distinctly through the ordinary gazing telescopes. At Aden, the telescope employed was one with an object-glass of six inches aperture, and six feet focal length. The object-glass was by Steinheil, and it gave an image of the sun of $\frac{3}{4}$ of an inch in diameter, which fell upon a photographic plate, placed in an ordinary sliding dark frame arranged for two images. The telescope was driven by clockwork.

The observers—MM. Tiele, Vogel, Fritsch, and Zenker—planted their instrument on Marshag Hill, a short distance from the Austrian observers. Each had his appointed part to perform. M. Fritsch prepared the photo-plates, M. Zenker placed them in the focus of the telescope, M. Tiele took off the cap from the object-glass and noted the time of exposure, while M. Vogel developed the plates. Three plates were exposed, each consisting of two images. Just before totality, MM. Fritsch and Vogel crept into their tent, and as their duties kept them in the dark chamber they saw nothing of the phenomenon. When the first plate was exposed the proper time, it was carried by an attendant into the tent. Now their hearts beat with eager excitement as the first process of development was unfolding to their view the success or non-success of their labours. "I poured," says M. Vogel, "the iron developer over the plate, eager to know what was to come. At this moment my light was extinguished. I called for light, but nobody heard me, as all were about their task. I stretched my right hand out of the tent, holding the sliding-frame in the left, and happily caught a small oil-lamp, which I had previously lighted in case of any difficulty. And now I saw the image of the sun appearing on the plate. The dark limb of the sun was surrounded by a series of peculiar elevations—the other side showed a strange hook; the phenomenon being exactly the same in both views on the plate. My joy was great, but there was no time for enjoyment. I soon received the second, and, after another minute, the third plate. 'The sun is coming forth,' exclaimed M. Zenker. The totality was over. All this seemed to have been done in a moment. When I developed the second plate, I perceived only very weak traces of an image. The clouds had veiled the sun at the very moment of the exposure. The third plate gave two brilliant views, with protuberances on the lower limb. Glad to have accomplished so much, we washed, fixed, and varnished the plates, and immediately took some copies on glass, which were intended to be forwarded to Europe separately."

The collodion used at Aden proved to be free from any particular

defect. Notwithstanding the high temperature, faultless images, free from dry spots, were obtained even where the photo-plates were developed a quarter of an hour after exposure. The silver-bath employed was an 8 per cent. solution, containing some nitric acid. The developing mixture found to be the best was—to one hundred parts of water add seven parts of sulphate of iron and ammonia, and five of acetic acid; the intensifying bath being composed of two parts of nitrate of silver, three of citric acid, and fifty of water. It was found necessary, in consequence of the great heat, to employ an acid bath, an acid developer, and an acid intensifying bath.

When Major Tennant forwarded his first communication to the Astronomer Royal, written a few hours after the eclipse, he evidently felt disappointed at the appearance of his six photo-plates. He remarked: "The morning was very promising, and if it had followed the course of its predecessor, we should have had a magnificent clear sky; but it clouded over the east with thin cumulo-strati, which, while hardly stopping vision, interfered very much with the photographic energy; and the result was that every negative was under-exposed, and we have little more than very dense marks showing the protuberances. The six plates arranged for were duly exposed, but the heat so concentrated the nitrate of silver solution, that, besides showing but faint traces of any corona, they are all covered with spots. Still we may make something of them, and will try." He did try, and, after much trouble, has succeeded in obtaining some very important delineations of the different prominences.

In a subsequent letter, addressed to Mr. Warren De La Rue, Major Tennant remarked that he had been enlarging his photographs, and that the details are exhibited far better than he had expected. The Great Horn on two of the plates is represented as a ribbon of light coiled spirally round a semi-transparent centre. This is evident to anyone who has seen one of the eight sets of glass copies sent to the Astronomer Royal for distribution. Major Tennant remarks that "there can be no doubt about the structure of the Horn, but I would draw attention to the closeness of the spiral low down, when first formed, and its size above, which seem to me to accord with my theory. Indeed, I almost feel that there are two close spirals in the lower part of the luminous vapour, each partaking of the general motion, and in the upper part coalescing." Major Tennant considered that the curious spiral texture of this protuberance would seem to prove that some of the lighter vapours, such as sodium and magnesium, which are ordinarily nearer the sun's surface, might have been forced up to so great an altitude by an outburst of hydrogen.

Since the glass copies of the Guntoor photographs have arrived in England, Mr. Warren De La Rue has undertaken, on behalf of the Royal Astronomical Society, to obtain large paper copies of them, and to superintend their engraving for insertion in the next volume of the *Memoirs* of that Society. It could not be possible to have placed them in better hands, for the experience of Mr. De La Rue in these matters cannot be equalled. We have seen the proofs of these engravings, which exhibit clearly the spiral form of the Great Horn. Mr. De La Rue is perfectly satisfied with them, and he remarks that,

"these pictures are extremely interesting, and, in my opinion, must be considered as eminently successful results."

From the different drawings of the Great Horn protuberance, Mr. De La Rue was at one time led to believe that an axial rotation was observable; but when he obtained a copy of the first Aden photograph, he found that the direction of the Horn was quite opposite to that which was published in the *Engineer*, and that his previous conclusions could not therefore be borne out. He, however, considers, by comparing the Aden and Guntoor photographs side by side, that some change had occurred in the direction of the Great Horn during the interval of forty minutes; but he is not able to say, with certainty, whether this change was, or was not, due to an axial rotation of the protuberance.

Some most valuable results were obtained by Mr. De La Rue from his photographs of 1860, by a series of very careful measurements of the relative positions of the sun and moon as depicted on the photo-plates. He has applied his method to the Guntoor paper photographs, from which he has deduced graphically several important elements. On comparison with corresponding tabular data furnished by Mr. Hind, and computed specially for the assumed position of Major Tennant's station at Guntoor, the agreement between the observed and calculated results is very close indeed. This is all the more remarkable when we consider that the measurements were obtained from paper photographs of only two inches in diameter. The comparison of the separate results deduced from Mr. Hind's numbers and Mr. De La Rue's measurements is as follows * :—

	Hind.	De La Rue.
Position angle of first internal contact, N. E. S. W.	103°	101°
Position angle of second internal contact	289°	294°
Nearest approach of centres	3·9″	7″
Moon's apparent motion during the totality in Right Ascension E.	134·86″	133·5″
Moon's apparent motion during the totality in Declination S.	37·59″	33·7″
Ratio of semi-diameter of Moon to semi-diameter of Sun = 1	1·07195	1·07188
Orbital angle	15° 58′	15°

It is a remarkable fact, that in the last three great total eclipses of the sun, the observation of which was undertaken by European astronomers, one large horned protuberance has stood out from the rest sufficiently to attract the attention of every observer.† Thus, in 1851, the large boomerang prominence was observed from Norway to the most eastern station on the central line of shadow, and in 1860 one of a hook-shape was also generally seen. The latter is easily

* "Astronomical Society's Monthly Notices," vol. xxix. p. 82.

† To these may be added the recent total eclipse of August 7, 1869, which took place after the above remarks were written. At Des Moines, Iowa, the largest protuberance was observed to be semicircular in shape, "with a *finger* extending downward one-eighth part of the sun's diameter." At Mattorn, Illinois, the observers (Professors Hough and Murray) saw the flame-like protuberances with wonderful distinctness. "One very large one on the lower limb of the sun, and three nearly as large on the upper limb, together with three or four more, were visible. The one on the lower limb had somewhat the appearance of a full-rigged ship with sails set."

identified, among other large protuberances, in Mr. De La Rue's series of photographs. The horned appearance was specially noticed by several observers. According to an estimation of M. Goldschmidt, who was stationed at Vittoria, its altitude above the sun's limb was 3′ 20″. In the eclipse of August, 1868, the Great Horn was much more isolated from other rose-coloured matter than some of the larger prominences depicted in Mr. De La Rue's photographs, one of which has indications of a spiral construction similar to that observable in Major Tennant's photo-plates. This apparent spiral form may not really be absolute evidence of a vortical motion, but it may be the effect produced on the plate by the heterogeneous nature of the protuberance. If, however, an axial rotation had been proved by a comparison of the diagrams of the successive observers along the central line, we might naturally assume that the gaseous matter was undergoing a spiral movement by the simple rotation of the prominence. Such a phenomenon would not have been impossible, especially as Mr. Lockyer's recent solar observations have shown that vertical movements of the gaseous matter have been detected equal to 40 miles a second, while the horizontal changes have been perceived exhibiting a velocity of 120 miles a second. When such enormous variations are continually going on in this gaseous envelope, we might have been prepared for a much greater alteration of form in the great prominence than that found in the different diagrams of the observers. The wonderful insight which the spectroscope has enabled us to obtain of the physical constitution of the outlying portions of the sun's photosphere has, in the hands of M. Janssen, Mr. Lockyer, Mr. Huggins, M. Zöllner, and Father Secchi, anticipated almost completely all future observations of the rose-coloured prominences during eclipses. Much of the individual interest attaching to these solar appendages is lost when we know that they may be, and probably are, merely a series of evanescent portions of the usual gaseous envelope, which Mr. Lockyer has called "the chromosphere," in contradistinction to the actual photosphere, the source of light and heat. M. Janssen observed, that even the Great Horn, of which we have the form so accurately represented in the Aden and Guntoor photographs, was nearly dissolved on the day succeeding the eclipse, and that new prominences were observed to come into existence and to disappear while the eye was directed to them. Such ephemeral phenomena can only be permanently interesting as forming integral portions of the chromosphere; and as a practical illustration of the enormous magnitude of the continuous solar disturbances evidently at work, either in the photosphere, or in the light gaseous outer casing of the sun.*

The probable existence of a bed of matter of the same composition as that of the protuberances had been suggested by several astronomers, who observed the eclipses of 1851 and 1860. The rosy fringe of light seen by the Astronomer Royal, Mr. Hind, Mr. Dawes, and others, in 1851, was, no doubt, a portion of the chromosphere,

* Professor Zöllner, of Leipsic, has lately published some remarkable delineations of the rose-coloured protuberances, as observed by him on July 1 and 4, 1869. The rapidity of motion of the composing matter is very clearly shown in the different sketches of the same prominence, some of which were made at intervals of only a few minutes of time.

the existence of which has now been proved beyond question. M. Littrow and M. Le Verrier considered, long before the application of spectrum-analysis to this class of observation was even thought of, that the prominences could not be satisfactorily explained, except by assuming that the exterior surface of the sun is covered with a stratum of rose-coloured matter. Alluding to the theory of the existence of a series of solar envelopes, M. Le Verrier remarks that he fears that "the majority of these envelopes are only pure fictions, and that the sun is simply a luminous body, on account of its high temperature, covered by a continuous stratum of rose-coloured matter, the existence of which is now known. . . . . When the two rose-coloured prominences were observed during the total eclipse of July 8, 1842, a trace of a third envelope was noticed, according to M. Arago, above the photosphere, formed of dark or feebly luminous clouds; but it was not known then from whence these rose-coloured clouds proceeded. It appears clear now that they emanated accidentally from the stratum of matter which covered all the surface of the sun to an altitude of 8 to 10 seconds. I have clearly distinguished this stratum on the western side, and over a considerable extent of the limb at the moment of emersion. M. Ismaïl noticed the same thing on the eastern side after the immersion. But this is not all. When we examine the records of former eclipses we have found that, although the observers were furnished with good instruments, and that red glass was not used in the eyepiece, yet they always remarked the appearance of a purple border when the circumstances permitted it to be seen,—*i.e.*, when, during the totality, the limb of the sun was only separated from the limb of the moon by a few seconds, either on the east, west, north, or south. . . . . Thus the existence of a stratum of rose-coloured matter, partly transparent, covering the whole surface of the sun, is a fact proved by the observations. They also show that certain parts of this stratum of matter are frequently elevated above the general level, forming the cloudy appendages, which are only the emanations of the solar atmosphere, whose colour they retain."

As an illustration of the advantage derived from photographic representations of the protuberances, with regard to their relative position on the sun's limb, the following short tabular statement of the observed angular position of the great boomerang prominence, as recorded by the different observers in 1851, will serve to show the amount of the variations to which the estimated positions are liable. So long as the protuberances on the photographic plates are visible, their angular positions, either from the vertex or the north point, can be measured at leisure with the greatest accuracy, notwithstanding any artistic defects attached to the plates as pictures of the eclipse. When estimated by the eye, the mind is generally so overtaxed with the multiplicity of duties to be performed in so very limited an interval, that considerable differences in the observed angle may be reasonably expected. Some of the observers in 1851 had wires fixed in the field of the telescope, both in a vertical and horizontal direction, as guides in estimating the angular position of the prominences. With all this precaution, however, the estimated angles fall far short

in accuracy to those which can be read off from the photographs. The following table gives the approximate angle from the north point of the hook-shaped prominence observed in 1851, measuring from north to east, south and west, and also the difference of each observer's estimation from the mean of all :—

Observer.	Place of Observation.	Angle from Sun's North Point.	Difference from Mean of All.
		°	°
	NORWAY.		
J. C. Adams . .	Fredericksværn . . .	277·0	− 1·5
E. Dunkin . .	Christiania	280·3	+ 1·8
W. Gray . . .	Tune, near Sarpsborg .	272·0	− 6·5
S. Jackson . .	Fyldpaa, near Tonsburg	280·5	+ 2·0
R. Stephenson .	Fredericksværn . . .	281·3	+ 2·8
	SWEDEN.		
G. B. Airy . .	Göttenburg	300·6	+22·1
G. P. Bond . .	Lilla Edet	278·5	0·0
R. C. Carrington .	Lilla Edet	272·0	− 6·5
W. R. Dawes . .	Rævelsberg	280·0	+ 1·5
J. R. Hind . .	Rævelsberg	275·0	− 3·5
W. Lassell . .	Trollhätten Falls . .	270·5	− 8·0
J. Stanistreet .	Trollhätten Falls . .	269·0	− 9·5
W. Swan . . .	Göttenburg	282·8	+ 4·3
G. Williams . .	Trollhätten Falls . .	280·0	+ 1·5

3. THE CORONA.

The general cloudy state of the sky during the totality prevented the corona from being seen to advantage at almost every station. At some it was scarcely seen at all. The corona was observed most favourably at some of the eastern stations, but the observers' attention at Guntoor and Hua Tong was too much occupied with the spectroscopic observations of the protuberances to permit much detailed notice of it. According to M. Stéphan, who gave occasional glances at the corona, its general aspect was similar to the delineations of the phenomenon observed in the eclipses of 1851 and 1860. In drawings made at Hua Tong, by M. Olry and M. Bordes, special rays seem to radiate from the limb corresponding to the position of the prominences.* Similar rays are also shown in the drawings of the Dutch observers at Mantawalu and Gorontalo, in the island of Celebes. From the polariscope observations of Captain Branfill and Lieutenant Campbell, we may decide in a sufficiently positive manner that the corona is caused by the light of the sun, through the centre of which the plane of polarization passes; but whether the corona actually encircles the sun, or whether it is formed in some manner by the phenomenon of light passing through the earth's atmosphere, is still not sufficiently explained. Lieutenant Campbell remarks : "The only points on which I can speak with any confidence are as follows :

* In the eclipse of August 7, 1869, special rays, similar to those observed at Hua Tong, by MM. Olry and Bordes, were seen at Mattoon, Illinois. Instead of a halo of light surrounding the moon, the corona was distinctly observed to be "a five-pointed prong on the lower limb, and a two-pointed prong on the upper circumference of the moon, the points having a radiant appearance."

—1. When using the double-image prism, the strong difference of colour of the two images of the corona, and the absence of such difference in the case of the most prominent red flame.—2. With Savart's polariscope the bands from the corona were decided; with a low power they were wanting in intensity and colour, excepting alternate black and white, making it difficult to specify the nature of the centre; and their position was at right angles to the limb, extending over about 30° of the circumference. When the polariscope was turned, the bands travelled bodily round the limb without other change in position or arrangement, as if, indeed, they were revolving round the centre of the sun as an axis. With a higher power, when a smaller portion of the corona was embraced, the bands were brighter-coloured, and seen in a different position, or tangents to the limb. . . . . The brilliance of the light of the corona, when it burst out through the openings in the clouds, astonished me." At Aden, M. Weiss could see only traces of the corona through the limited clear portions of the sky near the sun and moon. In the second minute of totality, two luminous rays were noticed at the point where the sun had disappeared. They were somewhat curved near the moon, the concavity of each being turned towards each other, representing a kind of parabolic arc whose summit fell within the limb of the moon. These two rays were separated by a dark space. Another luminous track of light, but not so long as the other two, was seen about ninety degrees south.

Most of the observers who had an uninterrupted view of the corona, have remarked that the form was very irregular, bunches of luminous rays shooting forth from different parts of the moon's limb, and extending some distance farther than the average limits of the ring. These rays were noticed specially by nearly all the observers in the island of Celebes. Mr. Pope Hennessy and Lieutenant Ray also observed them at Barram Point. "Suddenly," says Mr. Hennessy, "there burst forth a luminous ring around the moon. This ring was composed of a multitude of rays, quite irregular in length and in direction; from the upper and lower parts they extended in bands to a distance more than twice the diameter of the sun. Other bands appeared to fall towards one side; but in this there was no regularity, for bands near them fell away apparently towards the other side. When I called attention to this, Lieutenant Ray said, 'Yes, I see them—they are like horses' tails;' and they certainly resembled masses of luminous hair in complete disorder. I have said these bands appeared to fall to one side: but I do not mean that they actually fell or moved in any way during the observation. If the atmosphere had not been perfectly clear, it is possible that the appearance they presented would lead to the supposition that they moved; but no optical delusion of the kind was possible under the circumstances. During the instant when the sun was disappearing, the edge of the luminous crescent became broken up into numerous points of light. The moment these were gone, the rays I have just mentioned shot forth, and, at the same time, we noticed the sudden appearance of the rose-coloured protuberances."

There is very little doubt that many of the delineations of the

corona in this and former eclipses are a little fanciful, much depending on the imaginative character of the observer, especially if he has not been in the habit of recording the appearance of astronomical phenomena of this kind. The coronæ of 1851 and 1860, which were much more favourably observed than that of 1868, have been represented on paper in all imaginable forms: by some observers as a faint glory around the dark body of the moon; by others, as a series of rays equally scattered around the moon, and extending to a distance of one or two diameters from the limb; while a few have, in addition to a brilliant glory, depicted bunches of special rays shooting forth in a most fantastic manner. Many of these apparent variations in the form of the corona, as viewed by the unassisted eye, owe their origin, most probably, to the defective vision of the observer—the corona having been seen, in truth, with the eye out of focus. As an example, let a nearsighted observer look at the brightest stars on any fine night, with and without his spectacles, when he will at once perceive the wonderful difference they present. In the one case, they appear as brilliant points, while in the other, numerous rays are seen to shoot forth from each star.

4. General Appearances observed with the Unassisted Eye.

The important telescopic observations which occupied nearly all the scientific observers during the Indian eclipse of 1868, allowed but little time for any special attention being given to the general appearances of the darkness as exhibited on surrounding objects. However, it has been remarked, by nearly all the principal observers, that the darkness was much less than what was anticipated, considering the long interval of the total phase. Major Tennant has even recorded that the colour of the darkness was not so gloomy as that at Delhi in 1857, when the eclipse was only a partial one. At no time at Jamkandi was the darkness too great to read the chronometer, and to write notes in pencil without difficulty. Lieut. Campbell found so much stray light about, that when the concentrated glare from a bull's-eye lantern was thrown upon paper it appeared rather dull. At Beejapoor and Moolwar, probably owing partly to the densely-clouded state of the sky as well as the eclipse, the darkness appears to have been much greater. At Beejapoor, in some parts of the town, it is related that it was scarcely possible to see one's hand; while at Moolwar, where the North German astronomers were located, one of the party accidentally dropped a part of an eyepiece of a telescope, which he was unable to find, during the totality, even when the eye was placed close to the ground. At the most favoured stations in respect of the weather, those who were not occupied with the telescopes saw several stars, including the planet Venus. Although there were few opportunities afforded in Western India for viewing the stars, yet Venus was occasionally seen through breaks in the clouds at Bimlipatam and Vizianagram, and also at Rutnagherry on the seacoast. Capt. Rennoldson, of the Rangoon, also saw Venus and one star through the haze and flying clouds. Dr. Weiss, Col. Addison, and some English officers noticed at Aden the passing

shadow travel over some drapery which had been placed in a favourable position for the purpose. Col. Addison observes that some of the officers saw "an appearance just before totality, as of shadows thrown by smoke, passing from the left shoulder towards the right foot of the observers as their backs were turned towards the sun. I had provided my friends with a scale, by which, if possible, they might measure the distances between the bands of light and shade, should any be visible. They found that it was impossible to take such a measure, as the motion was too rapid. The shadows progressed with wavelike motion, and with great rapidity, much like the motion of heated air over a furnace." Lieut. Beale noticed that the appearance of the shadows resembled that which would be caused by smoke passing between the sun and the sheets, excepting only that these shadows were in straight lines, and not in patches or curves.

M. Pierre, Director of the Botanical Garden at Saigon, Cochin China, observed the general effects of the eclipse on the landscape from the summit of Kow Luong, a mountain near Hua Tong, the station of M. Stéphan. He observed that the effect of the darkness on plants and animals was very small, but during the progress of the eclipse, before totality, a number of fixed coloured bands appeared and disappeared. When about two-tenths of the sun was obscured, M. Pierre detected them nearer the horizon. He noticed three at first, then seven, which was the greatest number seen at one time. They were all perpendicular to the horizon and parallel to themselves, each band being about 16 inches in breadth, coloured in various shades of intensity from red to purple-violet. They appeared on different points of the horizon east of the observer. When the exterior band on the right was purple, the most distant one on the opposite side was red, and *vice versâ*.

At Rutnagherry, south of Bombay, a non-professional observer, writing to a friend in England, remarked that the darkness came on gradually, just as the visible sun was the faintest thread of light possible. "This thread was very beautiful; the new moon is nothing to the golden light of this thread." A special watch was kept on the fowls in the hen-house, but, excepting that they quietly prepared to roost, no visible effect was seen on them. Through breaks in the clouds two protuberances were plainly recognised without the assistance of a telescope. Venus was distinctly visible, with the clouds rapidly passing over her. The whole scene "made one feel more utterly a thing of nothing than I have ever felt able to realise before; it was awfully grand. The darkness came on gradually, and it was before it was total that the lamps were lighted in the room; but at totality it was so dark that, walking back from the hen-house, I was obliged to pick my way, the ground being rocky."

It may be interesting just to mention, that during the American eclipse of August 7, 1869, the sky was generally free from clouds in every part of the country through which the central line of shadow passed. Nearly all the observers remark that the darkness during the totality was considerable, in appearance very similar to that of a moonlight night.

EDWIN DUNKIN.

SELF-IMPOSED TAXATION:

National Expenditure on Drink and Tobacco.

Some twenty years since, Mr. Porter, secretary to the Board of Trade, read a paper before the meeting of the British Association at Edinburgh, on "The Self-Imposed Taxation of the Working Classes of the United Kingdom," which excited considerable interest at the time. In that paper he pointed out the very large expenditure devoted by those classes to purposes of personal and sensual gratification, on objects in which the other members of their families had no share. Taking the official view, Mr. Porter directed attention to the circumstance that, whilst the taxes imposed by Government formed the subject of so many and such grievous lamentations, this self-imposed taxation, though much greater in amount, was borne uncomplainingly,—forming a measure of the prosperity of the people, and furnishing the best proof that could be afforded of their ability to bear other burdens.

During the twenty years that have elapsed since then, many changes have occurred, not the least important of which has been the admission of the working-classes to the exercise of political power; and it becomes a matter of general interest to know whether in that interval the people, not merely of the working-classes, but of the other classes of society, have been growing more provident or more spendthrift,—more frugal in their expenditure on personal indulgences, or the reverse. The question is, however, much more than one of merely curious interest, but deserves the serious attention of statesmen, ministers of religion, public men, and indeed of every member of the community,—involving, as it does, issues of the very greatest importance to the national wellbeing.

One of the most startling facts published by Mr. Porter in the paper above referred to, was that in Scotland—religious, educated Scotland—the average quantity of whisky consumed by the adult males of all ranks in the year 1849 was eleven and one-sixth gallons each and that the estimated expenditure on ardent spirits alone in the three kingdoms in that year amounted to upwards of twenty millions sterling! Not less astounding was the fact that, in the same year, upwards of twenty-six millions sterling were expended in the United Kingdom, principally by the labouring classes of England, upon beer! The total expenditure on spirits, beer, and tobacco (exclusive of wine, as being principally consumed by the upper classes), Mr. Porter made out to be not less than 57,063,230*l.* in 1849; and we do not know that his figures—drawn as they were from indisputable government returns—were ever called in question.

The popular drink in Scotland and Ireland then was, as it still is, whisky, and in England, beer. It is probable that conditions of climate, more particularly temperature and dampness of atmosphere, have much to do with the determination of the popular appetite for particular kinds of drink, in like manner as it is determined to particular kinds of food. Thus, flesh-meat and animal oils are consumed in northern countries to an extent that would probably be

fatal within the tropics. So it is with drinks, the strongest and most alcoholic of which are in demand in the North. Indeed, the earth may almost be divided into so many Drink Zones, not distinct, it is true, but running into and overlapping one another. Thus the Whisky and Brandywine Zone includes Scotland, the North of England and Ireland, Holland, Denmark, Norway and Sweden, and Northern Russia. The Beer Zone includes Southern England, Belgium, and Northern Germany. Then, farther south, we have the Wine Zone, extending from France and Spain, across Southern Germany, to Hungary. Next we come to the Sherbet Zone, embracing Northern Africa, Turkey, and Persia; until, within the tropics, we come to the Zone of Cold Water. So much for the natural appetite of man for drink as influenced by climate.

But, notwithstanding all that can be said in justification of the use of alcoholic drinks, there can be no doubt that in the United Kingdom—whatever may be said of Continental nations—we greatly err on the side of excess; and that over-indulgence in ardent spirits and beer has become a source not only of enormous national waste, but a cause of poverty, disease, demoralisation, and crime, to such an extent as to amount to a gigantic national evil.

Let us briefly state the Consumption of Ardent Spirits in the United Kingdom in 1868, compared with the returns for 1849, as stated by Mr. Porter:—

Home-made Spirits—Whisky, Gin, &c.	1849. Gallons.	1868.* Gallons.		Increase or Decrease, 1868. Gallons.
England . .	9,053,676	11,561,576	Increase .	2,507,900
Scotland . .	6,935,003	4,781,390	Decrease .	2,153,613
Ireland . .	6,973,333	4,676,704	Decrease .	2,296,629
	22,962,012	21,019,670	Net Decrease	1,942,342
Foreign and Colonial Spirits.				
Rum . . .	3,044,758	3,949,947	Increase .	905,189
Brandy . .	2,187,500	3,317,641	Ditto .	1,130,141
Other Spirits	38,868	1,131,277	Ditto .	1,092,409
Total Spirits consumed	28,233,138	29,418,535	Net Increase	1,185,397

We have thus a total quantity of 29,418,535 gallons of proof-spirits consumed in the United Kingdom in the year ending March, 1868, or equal to an average consumption of about four gallons for every male adult in the United Kingdom.

The consumption of home-made spirits was greatest in Scotland, where it was in the ratio of about six gallons for every adult male; next in Ireland, where it was about three-and-a-half gallons; next in England, where it was about two-and-a-quarter gallons. But as by far the larger proportion of the rum, brandy, hollands, &c., consumed during the same year, was consumed in England, it is probable that the total consumption of ardent spirits in that part of the United Kingdom in 1868 averaged over three gallons for every adult male.

Taking into account the increase in the population since 1849, there has been a decrease of five-and-one-sixth gallons per adult male in Scotland, attributable partly to the increased duty on spirits,

* Twelfth Report of the Commissioners of Inland Revenue (1869), Appendix, p. viii.

partly to the increased consumption of beer (which has to a considerable extent superseded whisky), and partly also to the operation of Forbes Mackenzie's Act, which has in a great measure stopped the excessive drinking of whisky on Sundays. In England there has been an increase of about three-quarters of a gallon of proof-spirits per head; while in Ireland, where the population is less by more than a million, the consumption per head has remained nearly stationary.

Next, as to the probable Expenditure on Ardent Spirits. The duty is charged on the *proof* spirit; but whisky is usually diluted to ten under proof, and gin to a considerably greater extent when retailed to consumers, by which the *quantity* actually sold is to that extent increased. It must also be borne in mind that the great body of consumers purchase in small quantities—in glasses, noggins, gills, quarterns, and half-quarterns; the profits realised by the dealers being very great, to reimburse the expenses attendant on the trade, and to afford a profitable living to the large number of persons engaged in it. Mr. Porter estimated, on the authority of several distillers whom he consulted, that the consumer pays for every gallon of spirits used three times the amount of the duty; and as the duty paid on home-made spirits in 1868 was 10,556,218*l.*, this would give a total expenditure in that year of over thirty-one millions sterling. But to keep within the mark, we consider we shall be safe in taking the selling price of home-made spirits (*proof* strength) to the public at 20*s.* per gallon, rum, hollands, and other spirits at 18*s.* per gallon, and brandy at 30*s.* per gallon. The account would then stand as follows:—

	Quantities Consumed in 1868. Gallons.		Prices per Gallon.	Total Expenditure. £
Home-made Spirits . . .	21,019,670	at	20*s.*	21,019,670
Rum	3,949,947	,,	18*s.*	3,554,952
Brandy	3,317,641	,,	30*s.*	4,976,461
Hollands and other Spirits .	1,131,277	,,	18*s.*	1,018,149
Total estimated annual expenditure on Spirits, 1868 . .				£30,569,232

We proceed next to the great item of Beer, the consumption of which is enormous, especially in England, which may be pronounced, without exaggeration, the greatest beer-drinking country in the world. The quantity consumed cannot, however, be ascertained with the same precision as in the case of spirits, the duty being levied, not upon the beer, but upon the malt of which it is made. Yet it is possible to form a sufficiently near approximation for the purposes of this article:—

	Bushels.
In the year ending the 31st December, 1868, the quantity of Malt consumed by brewers and retained for home consumption in the United Kingdom (exclusive of that used for beer exported, for distillation and exportation, and for feeding cattle) was	49,703,931*
In the same year the quantity of Sugar used in brewing was 39,395,104 lbs., which, taking the usual estimate of 25 lbs. of sugar as equal to 1 bushel of malt, would give an equivalent of	1,575,804
Total Malt, and its equivalent converted into Beer, equal to .	51,279,735

* Statistical Abstract of the United Kingdom, No. 16 (1869), p. 99.

As it is computed that a quarter of malt (8 bushels) will make 3½ barrels (36 gallons) of beer of average quality and strength, we thus find that the quantity made and consumed in 1868 would be equal to 20,832,884 barrels, or a total of 749,983,824 gallons of beer! And this quantity would be altogether independent of the dilution and adulteration which the beer undergoes before it reaches the consumer, in passing through the hands of the great body of publicans and beersellers, whose profit—in London, at least, as we are informed on the best authority—is mainly got out of such dilution and adulteration.

The consumption of beer has, of late years, increased at an alarming rate. Powerful interests have concurred in promoting it—the landed interest, the farming interest, the malting interest, the brewing interest, the government (because of the immense revenue which it produces), and the great army of beersellers. Though bad times may have temporarily affected the consumption, it has rapidly recovered itself, and again advanced at a greatly more rapid rate than either population or wages. Thus, during the last fifteen years, while the consumption of spirits has remained almost stationary in England and Ireland, and in Scotland has even shown a considerable decrease, the increase in the consumption of malt used in the making of beer consumed in England, has been equal to about fifteen millions of bushels, representing an increased annual consumption of upwards of two hundred million gallons of beer.

Taking the consumption of malt used by brewers in the three kingdoms respectively, as stated in the government returns for the year ending the 31st Sept., 1867,* we find the average consumption of beer to be equal to above 30 gallons per head of the entire population in England (men, women, and children), 11 gallons per head in Scotland, and 8 gallons per head in Ireland. Or, throwing out of consideration the women and children, who cannot count for much in the calculation, and setting against them the teetotallers (of whom there are said to be between two and three millions in the United Kingdom),

* Miscellaneous Statistics of the United Kingdom, part vii. (1869), p. 164. From these returns we obtain the following results:—

	Malt used by Brewers.	Equivalent quantity of Beer brewed.	Population, 1867.	Average Consumption per head.
	Bushels.	Gallons.		Gallons.
England & Wales . .	42,281,531			
Sugar 41,217,796 lbs.	=1,648,711			
	43,930,242	= 652,479,760	21,429,508	30½
Scotland . . .	2,396,531			
Sugar . 326,512 lbs.	= 13,060			
	2,409,591	= 35,240,256	3,170,769	11
Ireland	3,004,875			
Sugar 1,377,278 lbs.	= 55,091			
	3,059,966	= 44,751,960	5,557,196	8

N.B.—The quantity of malt and its equivalent of sugar used by brewers in the United Kingdom for the year ending the 31st December, 1868, exceeded these quantities by 1,879,936 bushels, or equal to an increased consumption of 27,494,064 gallons of beer,

who do not drink beer, against the women and children who do, we arrive at this extraordinary conclusion—that the consumption of beer is equal to about 120 gallons a year for every adult male in England, 44 gallons in Scotland, and 32 gallons in Ireland.

So much for the quantity of beer consumed. Now let us look at the probable expense incurred by consumers in buying it. In the above estimate we have assumed, for the purposes of calculation, that the beer consumed is of the uniform strength of 3¼ barrels to each quarter of malt. A large proportion of the beer sold to consumers, more particularly for use in families (such as table-beer) is, however, of greatly inferior strength, and is consequently so much the lower in price. But as the *quantity* of lower-priced beer so produced from the gross quantity of malt, would be only so much the greater in proportion to its reduced strength, and would have its corresponding equivalent in money, yielding probably a considerably larger profit to the brewer, it will be found that the general result will not be materially affected by this consideration.

Taking, then, the 749,983,824 gallons of beer sold to consumers in 1868, at average strength of 3¼ barrels to each quarter of malt, and assuming that it was sold at the moderate average price of 1*s.* 2*d.* a gallon, we arrive at a total sum of 43,749,556*l.* expended upon beer in the United Kingdom in the year 1868. But if the dilution and adulteration of the beer as sold over the counter and in the beer-houses be taken into account, and it be considered that by far the largest proportion is sold to the working-classes at 4*d.* and 6*d.* a quart, it will probably be admitted that this estimate is very considerably within the probable actual expenditure.

We thus find that the total estimated expenditure on spirits and beer in the United Kingdom in 1868, would amount to 74,317,280*l.*, averaging per adult male nearly as follows :—

	On Spirits of all kinds.	On Beer.	Total Expenditure per adult male.
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
In England . .	3 15 6*	7 0 0	10 15 6
In Scotland . .	5 8 0	2 11 4	7 19 4
In Ireland . . .	3 3 0	1 17 4	5 0 4

We pass from spirits and beer to Foreign Wine, the increase in which has of late years been very great, consequent upon the recent large reduction of the duty, and the increased facilities given for its purchase and consumption. In making his celebrated financial statement of 1860 to the House of Commons, Mr. Gladstone, then Chancellor of the Exchequer, said : "We are met by the cry that wine is the rich man's luxury ; so was tea 100 years ago, but now it is the poor man's, and above all the poor woman's, luxury. . . . Wine *is* the rich man's luxury ; and so you may make any article, if you put on enough duty, which effectually bars the poor man's access to it." The duty was taken off, and the poor man was thenceforward free to purchase cheap wine. But it is very doubtful whether any

* It must be stated that we have in this calculation given the English consumer credit for the bulk of the foreign spirits imported, the consumption of spirits in Scotland and Ireland being almost exclusively confined to whisky.

considerable part of the increase in the consumption of foreign wines of late years be due to the working-classes, who prefer the more appreciable strength of beer, gin, and whisky; almost the whole of the increased quantity imported since the reduction of the wine-duties being attributable to the increased consumption of the middle and upper classes.

The following statement shows at a glance the increase in the consumption of foreign wines within the last ten years.* The quantities cleared for home consumption, in 1858 (previous to the reduction of the duty) and in 1868, were as follows:—

	Duty.	1858.	Duty.	1868.		
	s. d.	Gallons.	*s. d.*	Gallons.		Gallons.
French Wines	5 9	571,993	1 9	4,501,931	Increase .	3,929,938
Spanish „	5 9	2,657,131	2 6	6,181,588	„ .	3,524,457
Portuguese „	5 9	1,921,677	2 6	2,853,470	„ .	931,793
Other Countries	5 9	816,995	2 6	1,580,213	„ .	763,218
Colonial Wines	2 9	729,429	2 9	34,539	Decrease .	694,890
		6,697,225		15,151,741	Net Increase	8,454,516

It will thus be seen that the consumption of French wine in Great Britain has increased about eightfold in ten years; that the consumption of Spanish wines (chiefly sherries) has more than doubled; that there has been a very large increase in the consumption of Portuguese and other foreign wines; but that the importation of British-colonial wines has almost ceased.

The Annual Expenditure on Wine is almost as surprising as the quantity consumed, and furnishes a remarkable illustration of the amount of surplus wealth in this country devoted to purposes of luxurious living. Taking the consumption of French wines to be in the proportion of two-thirds claret and one-third champagne—the estimate of a large London wine-merchant—we find the expenditure would be as follows:—

		£
French Wines—Two-thirds claret	at 12*s.* per gallon	1,571,975
„ One-third champagne . . .	„ 20*s.* „	1,309,979
Spanish and Portuguese—Port and sherry, average	20*s.* „	9,035,058
Rhenish and Moselle (viâ Holland)	at 20*s.* „	477,387
Madeira	„ 30*s.* „	37,242
Sicilian, Hungarian, Canary, and other Wines	„ 10*s.* „	556,276
Total probable expenditure on Foreign Wines, 1868 .		£12,987,917

The Duty actually paid on home-made spirits for the year ending the 31st March, 1869, was 10,556,218*l.*; on malt, 6,527,708*l.*; on foreign and colonial spirits, 4,330,870*l.*; on wine, 1,521,397*l.*; on tobacco and snuff, 6,496,512*l.*; and on licences to make and sell these various articles, 1,657,413*l.*—forming a total sum realised by the taxes on drink and tobacco of 31,090,118*l.*

The number of Licences issued to publicans, retailers of spirits, was 24,934; to publicans, retailers of beer, 84,958: the next in number being to sellers of beer and cider (not publicans), 54,194, and of wine, 42,436; and to brewers, 36,737. Thus there is, on an average, a

* These returns are taken from "Ridley and Co.'s Monthly Wine and Spirit Circular," a careful and accurate publication, recognised by the trade.

public-house licence and beer licence to about every forty-five males in the United Kingdom. The number of licences to sell tobacco was 279,716, or one for about every twenty-eight adult males in the United Kingdom.

To complete our statement of the Self-imposed Taxes of the United Kingdom in respect of narcotics, we further append the quantity and value of the Tobacco consumed yearly.

In arriving at the expenditure under this head, we first take the raw leaf imported and retained for home consumption, which costs about 10*d.* per lb., the duty on which is 3*s.* 2*d.* In the process of manufacture, the leaf absorbs about 33 per cent. of moisture, which has to be added to the weight of the article when sold, at the average price of (say) 4*s.* the lb. We thus arrive at the following figures:—

	lbs.	lbs.		£
Tobacco cleared for home consumption in the year ending 31st March, 1868*	40,380,033			
Add 33 per cent for moisture	13,325,400			
		53,705,433	at 4*s.*	10,741,086
Manufactured cigars (duty 5*s.* per lb.)		904,351	„ 15*s.*	678,263
Manufactured tobacco (cavendish or negrohead) and snuff		54,145	„ 7*s.*	18,950
Estimated total expenditure (1868) on tobacco and snuff				£11,438,299

It may be observed that the increase in the consumption of tobacco of late years has been almost as great as that of beer, the Commissioners of Inland Revenue reporting that the weight cleared for home consumption has increased from 13¾ oz. in 1841 to 21¾ oz. in 1867 per head of the whole population.† But if we throw out of consideration the women and children, and confine the calculation to adult males, it will then be found that the consumption in 1868 was equal to about 7 lbs., and the expenditure to about 30*s.* per head.

Let us now bring together these different items of consumption and expenditure, and see how the total amount stands:—

	Quantities.		Expenditure. £
Home and foreign spirits	29,418,535	galls.	30,568,232
Beer of average strength	749,983,824	„	43,749,056
Foreign and colonial wines	15,151,741	„	12,987,927
Cider, perry, home-made wines, &c.	..		say 1,500,000
Tobacco	54,663,829	lbs.	11,438,299
			£100,243,514‡

We have here an expenditure of more than 3*l.* 6*s.* per head of the entire population—men, women and children; or of more than 13*l.* for every adult male in the United Kingdom. The gross amount seems perfectly fabulous; but it is competent for any one to test it by the government returns, which are indisputable.

A hundred millions sterling a year on drink and tobacco! Yet we profess to be an economical and reforming people, canvassing every item of national expenditure, down even to the pen-nibs in the public

* Parliamentary Return, No. 463. Session 1868.
† Appendix to Twelfth Report of Commissioners of Inland Revenue, 1869, p. xv.
‡ Ibid. p. x.

offices, and the wages of the dockyard labourers. The whole expense of governing the United Kingdom for the year ending the 30th June, 1868—excluding the interest of the National Debt—amounted to only 47,196,626*l.*; yet nearly double this amount was voluntarily expended by the people governed upon drink. Surely, all the government extravagances that can be conjured up sink into insignificance beside this!

What we spend on ardent spirits and beer alone exceeds the entire national expenditure, including the interest of the National Debt. Our army, which does duty in all parts of the world, costs fourteen-and-a-half millions sterling yearly; while we spend over thirty millions upon gin, whisky, and brandy. Our navy costs nearly nine millions; and our beer nearly forty-four millions. The whole expense of managing the postal service costs only one-fourth of what we spend on tobacco. Some three millions a year are devoted by the middle and working classes to life and health assurance; and thirty times the amount to the indulgence of their sensual appetites!

Such facts as these are surely little creditable to us as a people. They show us to be among the most thoughtless, thriftless, and bibulous of nations,—very rich, but very wasteful, self-indulgent, and improvident. All classes seem to be alike in fault; but the penalties of the self-indulgence unquestionably fall the heaviest upon those who, for the most part, have had no share in incurring them, and are the least able to bear them—the wives and families of the labouring classes.

It is not known how much of the 330,000,000*l.* supposed to be annually earned by these classes is spent in drink, but it is undoubtedly very large. The whole life of a working-man is rounded by drink—drink at "footings," drink at sick-clubs, drink at morning, noon, and night. Many drink one-third of their earnings; some as much as one-half, and even more. It has been estimated that two-thirds of the home-made spirits and beer are consumed by the working classes of the United Kingdom. If this be so, it would give a total expenditure of about forty-eight millions sterling a year. What a splendid fund for co-operative industry, for social improvement, for education, for independence in old age!

But it is not the waste of means that is so much to be deplored as the demoralisation that excessive drinking produces,—the degradation, the suffering, the pauperism, and the crime, that are invariably found to follow in the track of drink. Although the number of drunken persons who come under the surveillance of the police is comparatively small, not fewer than 111,465 persons were summarily proceeded against in England and Wales in 1868 for "drunkenness," and being "drunk and disorderly"—an increase of 11,108 compared with the preceding year: of these, 34,479 were habitual drunkards—26,048 men, and 8431 women.* The largest number of committals for drunkenness were in Liverpool, where they amounted to 14,451, or 1 in 30 of the population; in Manchester, 9540, or 1 in 35; in Newcastle, 1756, or 1 in 62; in Hull, 963, or 1 in 101; in Birmingham, 2310, or 1 in 128; in Leeds, 1364, or 1 in 152; in

* Judicial Statistics, 1869, p. 25.

Salford, 637, or 1 in 157 ; and in the metropolitan district of London, 18,872, or 1 in 161: the proportion of arrests for "drunkenness," and for being "drunk and disorderly," being 1 in 180 to the whole population of England and Wales.

At Edinburgh—the "modern Athens"—5688 men and women were, in 1867, taken up drunk, 1915 of whom were found drunk in the streets, and kept by the police until sober,—the greater number having been taken into custody on Saturday, the weekly pay-day.* Formerly, a large proportion of the drunken persons were taken up on Sundays, but this disgraceful scandal has of late years been greatly abated by the working of Forbes Mackenzie's Act, the chief defect of which is that it applies to only one day in the week.

In Ireland, 82,194 persons were proceeded against for "drunkenness," and for being "drunk and disorderly," in 1866.† The people of Ireland spend annually above eight millions sterling on drink and tobacco. That money, if invested in land, for which the Irish have a strong desire, would purchase, at 30*l.* an acre, 270,000 acres yearly. But they seem to have a still stronger desire for drink. So they invest their surplus money in whisky, and look to the "Saxon tyrant" for land. In 1867 no fewer than 11,625 "poor down-trodden Irish" were picked up drunk in the streets of Dublin.‡ In one sense the landlord is the Irishman's greatest enemy ; but it is not the landlord who lets him a bit of land to till, but the landlord who supplies him with the drink that degrades and ruins him.

Tyranny, no doubt, exists in Ireland as well as in England and Scotland, but it is the tyranny of appetite far more than of law. Were any conceiveable tyrant to enforce upon his subjects the expenditure of so enormous a proportion of their earnings as the people of this country annually expend upon objects which are not only not necessary but pernicious, it would justify any amount of resistance on the part of the victims. But, as Lord John Russell truly observed to a deputation of working-men who once waited upon him on the subject of the taxation imposed upon their class:—"No government would dare to levy upon the people of this country anything like the enormous load of taxation which they voluntarily impose upon themselves in the article of drink alone."

But, besides the drunkenness and the poverty, there is also the crime that follows in its train. No manner of doubt exists as to the intimate relation between drunkenness and crime—a relation as intimate as that between drunkenness and drink. Ask the judges what it is that fills our gaols, and they will answer, with one voice, "It is strong drink." Judge Wightman publicly averred that four-fifths of the crimes brought before him were caused by drunkenness. Baron Martin, Mr. Justice Mellor, Baron Pigott, in their recent charges to grand juries, have repeatedly pointed out the close connection between drink and crime. Lord Chief Baron Kelly attributes at least "two-thirds of the crimes which came before the courts of law to intemperance;" and Lord Chief Justice Bovill has said that "Intemperance

* Miscellaneous Statistics of the United Kingdom, 1869, p. 121. The total number of cases of drunkenness for Scotland is not given in the return.

† Miscellaneous Statistics of the United Kingdom, 1869, p. 102. ‡ Ibid. p. 123.

is, directly or indirectly, the cause of by far the largest proportion of the crimes that have come under his observation."*

Wherever the greatest facilities are given for drinking, there drunkenness is the greatest, and there crime is the greatest. General Cartwright, Inspector-General of Constabulary for the Central Division of England, embracing nineteen English and six Welsh counties, in his report for last year, gives a series of returns which exhibit the following results †:—

Groups of Counties and Boroughs, Public and Beer Houses, and Population.	Persons proceeded against for Drunkenness, per 1000 of Population.
Under 6 Public and Beer Houses per 1000 of population	2·73 persons per 1000.
Above 6 and under 8 „ „	4·03 „
„ 8 „ 10 „ „	4·05 „
„ 10 „ 12 „ „	8·53 „
„ 12 „ 14 „ „	12·61 „

According to the last police returns,‡ the proportions of persons proceeded against summarily, in 1868, for drunkenness and crime were the greatest in Liverpool and Manchester, as follows:—

Towns.	Number of Indictable Offences.	Proportion per 1000 of Population.	Proceeded against for Drunkenness.	Proportion per 1000 of Population.
Liverpool . .	4,657	10·49	14,451	32·55
Manchester .	7,770	22·96	9,540	28·19

The number of Public-houses in Liverpool was 1926, and of Beer-houses 736, or one drinking-house to every 166 inhabitants; and in Manchester, 482 Public-houses and 2070 Beer-houses, or one drinking-house to every 132 inhabitants.§

The excessive drunkenness of Liverpool is in a great measure to be accounted for by the "Free-Trade-in-Drink" policy which for some years prevailed in that town. Because Free Trade had succeeded with corn and cotton, some of the local magistrates—and these men of the greatest weight and influence—jumped to the conclusion that it was equally applicable to every branch of business, including the trade in intoxicating drinks. "Why should not the public," it was said, "be as free to buy beer, wine, and spirits, as they are to buy bread and cheese?" If it was objected that giving increased facilities for drinking would inevitably lead to increase of drunkenness and crime, the answer was ready: "That may be; but it is no business of ours to regulate the public appetites. Men are not to be made sober by Acts of Parliament, or by benches of magistrates. Let the trade in drink

* Letter to the Venerable Archdeacon of Coventry—"Report of Convocation on Intemperance," 1869, p. 62.

† Ibid. p. 185.

‡ Miscellaneous Statistics of the United Kingdom, 1869, p. 126.

§ In Liverpool, 810 keepers of public-houses and beershops were apprehended and summoned before the magistrates for offences against the law ("Miscellaneous Statistics," 1869, p. 109); and in Manchester, 1076 public-houses and beershops were reported against by the police (Ibid. p. 116). Of 1006 taverns and public-houses in Dublin, 899 were, in 1867, reported against by the police or summoned before the magistrates (Ibid. p. 125). But it is not merely that these houses produce immorality; they also harbour it. Thus it is stated in the "Report on Judicial Statistics," 1869 (p. x.), that amongst the *known* resorts of thieves and prostitutes, there were in England and Wales, in the preceding year, 4154 public-houses and beershops.

stand on the same footing as other trades, and be regulated by the law of supply and demand as they are. The people are not children—they are free men; and it is their duty to practice the virtue of self-denial. If they wish to have drink, let them be free to drink; *only they must not get drunk!*"

This sort of reasoning prevailed for a time; and the trade in drink was "thrown open" in Liverpool in 1861. Any person applying to the bench of magistrates for licence to keep a public-house, unless of *notoriously* bad character, was allowed to have it. No restriction was placed on the number of licences issued. Accordingly, new drinking-houses were opened in all parts of the town. Beershops were converted into public-houses, and whole streets became lighted up with the glare of gin-shops. Thus Free Trade secured another triumph, and a drinking Utopia was fairly inaugurated in Liverpool.

The effects were such as might have been anticipated. The greatly-increased facilities and temptations offered for drinking led to an immediate large increase in drunkenness, crime, pauperism, disease, and death. Debauchery ran riot; outrage and violence multiplied; the gaols became filled with drunkards and criminals; and the death-rate ran up to 55 in every 1000 of the population. The increase in the consumption of drink was, of course, enormous. That of beer alone increased from 477,757 barrels for a population of 462,749 in 1861, to 656,155 barrels for a population of 491,145 in 1865,—in which latter year the expenditure, at 4*d.* the quart, would amount to 1,400,000*l.*, or an average of 11*l.* per head for beer alone for every male adult in Liverpool!

The judges on circuit, at each succeeding assizes, found the Liverpool calendar growing blacker; and one after another of them expostulated against the drunkenness fostered by the local authorities, in which they recognised its principal cause. Mr. Justice Mellor, in opening the assizes on the 24th of March, 1866, said: "There were no fewer than six charges of murder; three of the charges, he was sorry to say, were charges of wife-murder; and he regretted that these and most of the cases of manslaughter appeared to him to be the result of intoxication and drunkenness. He regretted also that in that town he found more crimes of violence proceeding from drunkenness than in almost any other town which it was his lot to visit." Lord Chief Baron Kelly also, in his charge to the grand jury, alluded to the extensive prevalence of drunkenness in the town, and he exhorted the licensing magistrates "to put down this odious vice, the chief cause of by far the greater proportion of the crimes and offences committed in this country."

Mr. Raffles, the local stipendiary magistrate, stopped the business of his court one morning to call attention to the increased drunkenness in Liverpool, and pointed out that three-fourths of the cases brought before him on Mondays arose from drunkenness on Saturday nights; urging the early closing of public-houses, and the provision of some place in which confirmed drunkards should be received and treated as lunatics. The coroner of Liverpool also, Mr. Clarke Aspinall, who shared, though unwillingly, in the harvest of death with the publicans in the fees paid to him for inquests held

on deaths caused by crime and drunkenness,—deaths by falling downstairs or against kerbstones—deaths by being run over in the streets while helpless—deaths of infants overlaid by their parents while drunk—deaths by murder and manslaughter committed under the influence of liquor,—publicly protested against the prevalence of "this drink—this everlasting drink—this unpunished, unrestricted, desolating drink!"

The local bench of magistrates could not fail to be influenced by these terrible facts. They could not but observe that the erroneous policy they had adopted was actively encouraging immorality and crime, which it was their duty to repress. Whatever might be said for the theory of Free Trade, it was clear that, as a matter of practice, it was wrong as applied to liquor. Supply and demand will regulate a healthy trade in food, but not in intoxicating drink. No man will be induced to eat more bread or meat by any increase in the number of bakers' or butchers' shops in a street; whereas increased facilities and opportunities for drinking will inevitably increase both drinking and drunkenness. A labouring-man, it has been said, may get by two or three public-houses on his way home, but he will not get by seven or eight.

Such was the experience of Liverpool. Drunkenness was rapidly demoralising and destroying the population; and the magistrates could not shut their eyes to the fact. At the Brewster Sessions held in August, 1866, a memorial was presented, signed by 33,341 of the best people in Liverpool, in which they expressed their "alarm and regret at the increase of late years in the number and magnitude of public-houses in the borough, believing that thereby drunkenness, poverty, crime, disease, and death had been increased in the town;" and earnestly begging "that no more licences may be granted at the ensuing licensing sessions for the borough of Liverpool." Another memorial, signed by 123 medical practitioners of the town, was also presented to the same effect. The result of the day's proceedings was, that the whole of the applications for new licences were refused; and the "Free-Trade-in-Drink" system, pursued during the preceding five years, was held in abeyance, if not finally reversed.

The late rapid increase in the consumption of intoxicating liquor by all classes of the people—and, most of all, the known spread of the vice of intemperance amongst women and young persons—must be regarded as by far the most alarming fact in the present condition of England. The necessity for reforming this evil infinitely transcends in importance all other public questions; for this terrible vice is pauperising the working-classes, sapping the foundations of public morality, and destroying the physical health of the nation. Institutions may be "reformed," and the people become "educated;" but what can be expected of a nation abandoned to degrading sensual indulgence?

Among those who have most deplored the spread of this vice because of its deteriorating effects on the spiritual life of the people, are the Clergy, who have lately directed public attention to the subject in a document which deserves the most extensive circulation and perusal. It is entitled "A Report by the Committee of Convocation

on Intemperance,"* and is based on a large mass of evidence obtained from the provincial clergy of the diocese of Canterbury, from medical men, magistrates, judges, coroners, governors and chaplains of prisons, heads of the constabulary throughout Great Britain, superintendents of lunatic asylums, and all persons able to give information as to the spread of intemperance, and its effects upon the religion, morality, pauperism, crime, and disease of the nation.

The report points out that the foremost and most prolific cause of the national intemperance is the operation of the Legislative Act of 1830, which called beer-houses into existence, and placed the power of licensing them in the hands of the Excise. It has been productive, says the report, "of widespread and almost unmitigated mischief: the testimony on this point, on the part of the magistracy, the constabulary, the parochial clergy, and other persons most competent to judge, is most emphatic and unanimous;" and the Committee "wish to record, as their deep and rooted conviction, that the multiplied and increasing facilities for obtaining intoxicating liquor provided by the law, are so many licensed temptations to the excess so frightfully prevalent, and working such dire and disastrous results among our people."

Among the terrible facts brought to light by the labours of the Committee is this, which cannot be too widely known,—that "at least *seventy-five per cent.* of the occupants of our workhouses, and a large proportion of those receiving outdoor pay, have become pensioners on the public, directly or indirectly, through drunkenness, and the improvidence and absence of self-respect which this pestilent vice is known to engender and perpetuate. The loss of strength and wealth to the country, the increase of taxation, the deterioration of national character thus produced, is at once humiliating and irritating to contemplate."

It is most probable that this timely and admirable report, based as it was on unquestionable evidence, was not without its effect in inducing the Legislature to pass the Act of last session, by which the power of licensing beer-houses has been taken out of the hands of the Excise and placed, together with the power of licensing public-houses, in those of the local magistrates. But the Committee also make an important recommendation, which is certain, before long, to become a leading topic of discussion throughout the country, and it is as follows:—

"Your Committee, in conclusion, are of opinion that, as the ancient and avowed object of licensing the sale of intoxicating liquors is to supply a supposed public want, without detriment to the public welfare, a legal power of restraining the issue or renewal of licences should be placed in the hands of the persons most deeply interested and affected—namely, *the inhabitants themselves*—who are entitled to protection from the injurious consequences of the present system."

There are two methods, two principles, to be followed in dealing practically with this important question of the sale of intoxicating drink. The one is the "Free Trade" principle, under which every person would be as free to open a drinking-shop as to open a baker's

* Published by Longman & Co. (1869).

or butcher's shop, leaving the trade to regulate itself according to the law of supply or demand. The other is the principle of restriction or limitation, the extent and nature of which would have to be settled on independent grounds of public convenience and welfare.

The ground of discussion is thus a very narrow one; and if it be once clearly seen that some legal restriction and regulation is needed, it will be all the easier to determine what the character of that restriction should be. So long as the hazy notion prevails that legislative restriction of the liquor traffic is at variance with the principles of Free Trade and opposed to personal liberty, so long a serious prejudice is interposed in the way of arriving at any sound conclusion on the subject.

But no party now seriously proposes to make the trade in drink entirely free. If there be such, the frightful experience of Liverpool —where even restriction existed to a certain extent—should be sufficient to make them close their mouths for ever. We arrive, then, at the conclusion that some restriction is desirable, nay essential, to the public welfare; and the question arises, under whose control should such restriction be? Ought it to be entrusted to an irresponsible body, however respectable, as it now is, or to the inhabitants of the districts themselves, who are mainly interested? We do not think there can be much difficulty in deciding between the two alternatives. And in these days, when institutions of all kinds are being brought more and more under the control of public opinion, probably much longer time will not be allowed to elapse before the drinking-houses of the United Kingdom are placed under some salutary and rigid regulations defined by the people themselves.

We conclude with the following pregnant passage from the Report of the Committee of Convocation, which is well worthy the serious attention of all public men:—

"Unless remedies be speedily and effectively supplied, consequences the most disastrous to us as a people cannot long be averted. No evil more nearly affects our national life and character—none more injuriously counteracts the spiritual work of the Church; and, therefore, no question more immediately demands the zeal of our clergy, the attention of our statesmen, the action of our legislature, and the thoughtful aid of our philanthropists.

"Nor can any sacrifice be esteemed too costly, or any efforts too great, to check and remedy what may be shown by accumulated and undeniable evidence to be sapping the foundations of our prosperity, blighting the future, lowering the reputation of our country, and destroying at once its physical strength and its moral and religious life.

"In review of the inquiries of Parliament as to the evils caused by this vice, and the conclusive evidence laid before its Committees, it is a matter of surprise to us that the Legislature has not long since interfered; and the Statesman who should have the magnanimity and moral courage to grapple with, and wisdom to overcome, this stupendous evil, would confer an incalculable benefit on his country, and establish a lasting claim to its gratitude."

S. Smiles.

ROYAL COMMISSION ON WATER SUPPLY.

Owing to the rapid increase of population on certain favoured portions of the earth's surface, and the concentration of vast numbers of human beings and other living creatures within the crowded areas of great cities, an evil has of late years arisen which was almost if not altogether unknown to former generations of men. Wherever Nature is left to herself, the equilibrium between various contending forces is admirably maintained. The smaller and feebler animals, for instance, are preserved from extinction by their superior cunning, fecundity, or swiftness; plants, decaying upon their native spot of earth, give back to the soil the nourishment which they derived from it; the forests, which clothe the more elevated regions, keep the ground cool and moist, and ensure a succession of moderate showers. As soon as Man appears upon the scene—being an habitual transgressor of Nature's laws—he at once interferes with her arrangements; but for a long time his efforts are so feeble, in comparison with her mighty forces, as to be almost imperceptible. It is only in thickly-peopled countries that his interference becomes actually mischievous. For example, Man kills off the beasts and birds of prey, whereupon the smaller creatures, being no longer kept in check, multiply exceedingly, and devour his crops; or, being unaware of Nature's system of manuring, he takes crop after crop from the same piece of ground, until its nutritive powers are exhausted; or he recklessly cuts down the upland forests, thereby causing the rain to descend at rare intervals, and in tremendous floods, washing the fertile soil from the slopes, and converting the valleys into unwholesome swamps. And the unpleasant truth has gradually been forced upon us that, beyond a certain point, the resources of Nature are capable of exhaustion, and her efforts at reparation capable of ill-success. If our ancestors, from the days of Boadicea onwards, had been wont to expend our coal-stores as freely as we are expending them now, there would have been very little left for us; we have an uneasy consciousness that, perhaps, we fish the seas surrounding our islands too greedily, and that even the herring, the proverbial type of fecundity, runs some risk of extinction; lastly, to approach nearer to the subject of the present inquiry, we have, throughout the length and breadth of the country, defiled our running streams by pouring into them our household filth and our manufacturing refuse. Now Nature, as we shall hereafter show, has an admirable apparatus for purifying dirty water, but she is not omnipotent; she will disentangle a moderate amount of filth from the limpid current, but when three millions of people empty their slops into a section of a tidal river ten miles long, Nature becomes exhausted, and Man must of his own energy repair the mischief which he has caused.

For a long time past an idea has been current that the water supplied to the metropolis was not what it should be, either in quantity or quality; and this idea was strengthened when, in the year 1866, a severe outbreak of cholera took place at the East-end of London—an outbreak confidently stated at the time to be caused, or, at any rate,

aggravated by the impure quality of the water supplied to that district. Accordingly, a Royal Commission was appointed to sift the whole subject of Water Supply, and the Commissioners were specially instructed to seek information on the following topics: namely, to ascertain "what supply of unpolluted and wholesome water can be obtained by collecting and storing water in the high grounds of England and Wales, either by the aid of natural lakes, or by artificial reservoirs at a sufficient elevation for the supply of the large towns; and to inquire into the present Water Supply to the metropolis, and whether there are other districts, in addition to the high districts of England and Wales, from which a good supply of unpolluted and wholesome water can be obtained; and to report, firstly, which of such sources are best suited for the supply of the metropolis and its suburbs—and, secondly, how the supply from the remaining sources may be most beneficially distributed among the principal towns."

In conducting an investigation of this sort, it matters little at which end of the subject we begin. The Thames and his tributaries are charged with being incompetent to supply London with a sufficient quantity of wholesome water. In such a case, we may either begin by examining into the alleged deficiencies of our present source of water-supply, or we may postpone the claims of the Thames on our attention, until we have seen whether it is practicable to supply London with water from other and more distant parts of the kingdom. The Commissioners adopt the latter course, and we shall follow their example.

If we knew that ten years hence the Thames, as a fresh-water river, would cease to exist, that the salt-water would flow up through Oxfordshire and Berks, and that the innumerable rills and springs which rise in the chalk and greensand of those and other adjacent counties would be dried up, while at the same time the population of London would be increased to five millions, where should we look for a water-supply? In reply to this imaginary supposition, let us examine Mr. Bateman's scheme. Mr. Bateman is no mere theorist, but an eminent engineer, who has constructed some of the largest works for water-supply in the kingdom. Among other undertakings of this nature, he has carried out the magnificent scheme by which the city of Glasgow is furnished with an abundant supply of pure water. For many years the inhabitants of that city, who had previously drawn their supplies from the Clyde, had become distrustful of the quality of the water, and had anxiously sought for purer sources. In 1853, Mr. Bateman proposed to supply the city by water collected in Loch Katrine, and brought to Glasgow by a conduit thirty-five miles long. This bold scheme was successfully accomplished, and the water was delivered from the new source in 1859. His present proposal is somewhat of the same nature, but of far greater magnitude.

Maintaining that the quality of the water at present supplied to London is indifferent, that the existing supply is insufficient, and will prove more insufficient as the great city grows bigger and bigger, Mr. Bateman proposes to abandon the Thames altogether, and draw the future water-consumption of London from the mountains of North

Wales. The district which he has fixed upon as his gathering-ground comprises an area of about 200 square miles, and consists of an elevated tract to the south of Snowdon, and to the east of Plinlimmon and Cader Idris. In this upland region the head-waters of the Severn take their rise. The area above-mentioned also includes the drainage-grounds of two other rivers—namely, the Vyrnwy and Banw, whose combined waters flow into the Severn between Welshpool and Shrewsbury. Both these districts are said to be favourable for water-collection. The ground lies high, the rainfall is large, and the conformation of the country admits of the construction of large reservoirs. The quality of the water is shown by analysis to be very pure, and remarkably free from mineral matter. Mr. Bateman proposes to convey the water from these two districts by separate conduits to a point of junction near Montgomery, whence it would be conducted southwards by a common aqueduct, and passing near the towns of Stourbridge, Bromsgrove, Warwick, Banbury, Aylesbury, Tring, and Watford, would discharge into large reservoirs proposed to be constructed on the high land near Stanmore, about ten miles north-west of London, and 270 feet above the sea-level. The aqueduct would be about 180 miles long, and is designed to convey 230,000,000 gallons per day. Mr. Bateman would make use, as much as possible, of the existing store reservoirs of the various companies, but would rearrange the distribution, and provide for a constant service to all the houses, thus doing away with the present intermittent system. He holds that no scheme is worthy of consideration which does not provide for an immediate supply of 200,000,000 gallons a day, with a capability of further extension. It becomes, therefore, a point of the highest importance to ascertain the probable amount of water which can be collected on his proposed gathering-ground. Three times as much rain falls in the mountainous region of North Wales as in the level country about London. The average annual amount is 75 inches, but, as all schemes for water-supply must be estimated on the basis of exceptionally dry years, Mr. Bateman adopts 60 inches as a safe average. From this amount 24 inches are deducted for evaporation and absorption, and from the remaining 36 inches one-fourth must be taken off for the purpose of affording compensation to the rivers of the district. After all deductions have been made, the balance is calculated to afford a supply of 219,000,000 gallons per day. But now comes the difficulty which besets all plans of artificial water-collection. If the copious showers of North Wales fell in moderate quantities, and at frequent intervals throughout the year, hardly any receptacles for storage would be needed, and the engineer's task would be comparatively easy. But as the tremendous floods of one period are often followed at another period by lengthened intervals of drought, and as there are no natural lakes in the district, Mr. Bateman is obliged to have recourse to the formation of enormous reservoirs. He proposes, in all, to construct seven of these receptacles, holding collectively nearly 7,000,000,000 cubic feet, and capable of supplying the metropolis for 140 days. Two of these reservoirs would be some miles in length, and one, with an embankment 75 feet high, would

hold 50 per cent. more than the available water of Loch Katrine. With regard to the expense of this undertaking, Mr. Bateman is in favour of developing his scheme gradually, beginning with a supply of 130,000,000 gallons, and bringing it, by four progressive stages, to the full amount of 230,000,000, which is more than double the present metropolitan water-supply. The total outlay on the finished work is estimated at about £11,000,000 sterling. This seems an enormous sum; but, in proportion to the wealth and population of London, it is far less than the citizens of Liverpool, Manchester, and Glasgow have paid for the privilege of pure water. In those towns the waterworks are the property of the Corporation, and their expenses are defrayed by two compulsory rates, a public rate and a domestic rate, together amounting to about a shilling in the pound. In conclusion, Mr. Bateman shows why, having made up his mind that the Thames is no longer fit to supply London with water, he went to the Welsh hills. His choice lay between three districts—the hilly region of Derbyshire and Yorkshire, the Cumberland lakes, and the Welsh highlands. He objected to the "backbone of England," because it was not suited for the construction of reservoirs, and because it is already the natural resource of the manufacturing towns of Lancashire and Yorkshire. He preferred North Wales to Cumberland, because artificial lakes could be made holding proportionately more water than the natural lakes, and because the former district was much nearer the metropolis.

The Commissioners think that Mr. Bateman's scheme is practicable in an engineering point of view, but that his calculations do not afford a trustworthy estimate of the probable cost. Though the water would be carried as far as Stanmore by gravitation, yet, as the proposed reservoirs there are only 270 feet above the sea-level, he could not supply the upper storeys of many London houses without resorting to pumping. In quality the water resembles that of Loch Katrine; it is soft and pure—that is to say, it is free from mineral salts and organic matter. But during floods it is liable to be coloured brown by the action of peat; and as most of the water in the great reservoirs would be collected during the prevalence of floods, it is not unlikely that the water would reach London of an habitually yellowish tint. This ugly colour would probably be more unpopular with the Londoners than a more pernicious but less easily perceptible taint. We shall speak hereafter of the comparative merits and demerits of hard and soft water; it is sufficient to observe here that, while hard water has no perceptible effect on lead, soft water frequently exerts an energetic decomposing action. The Commissioners think that Mr. Bateman has overestimated the probable rainfall, and would consequently be obliged to enlarge his gathering-ground, and therefore increase his outlay. His scheme, if ever it came before Parliament, would meet with determined opposition from various interests connected with the river and estuary of the Severn, as it would be asserted that the abstraction of water from the river would hinder the navigation and injure the fisheries. But the most formidable objections to Mr. Batmean's scheme have yet to be mentioned. This great city, which now derives its water-supply from several distinct

sources, would then become dependent on an aqueduct 180 miles long. A single rat, it is said, might submerge the kingdom of Holland; and in like manner, to say nothing of open enemies in case of an invasion, a single mischievous or malicious person might inflict most serious damage on the people of London. During the "Fenian scare" of 1867, the possibility of wilful injury to the waterworks caused great anxiety in Liverpool. Frost, again, would be a formidable foe. During severe winters it requires considerable labour to keep the New River in efficient flow; and although no inconvenience of this sort has affected the supply of water from Loch Katrine to Glasgow, it must be borne in mind that the Loch Katrine conduit consists chiefly of deep-sunk tunnels, whereas there would be 100 miles of open cutting between Montgomeryshire and Stanmore. Any great national calamity, such as a landslip, might cut off the supply of water for a lengthened period; and, lastly, in recollection of the inundations at Holmfirth and other places, the bursting of one of these gigantic reservoirs is not beyond the bounds of possibility.

We have devoted considerable space to Mr. Bateman's scheme, because, both for good and evil, it is typical of other similar plans. These plans, therefore, may be disposed of more briefly. A scheme which even exceeds Mr. Bateman's in the boldness of its conception and the magnitude of its projected works, is that of Messrs. Hemans and Hassard, who undertake to supply London with water from the Cumberland lakes. They propose to dam up the outlets of Thirlmere and Hawes Water, so as to raise the level of the former by sixty-four and of the latter by forty-two feet, and then to pour their respective volumes of water into Ulleswater, which would be treated as a great distributing reservoir. At present the superfluous contents of Ulleswater escape at the north end, and flow by the Eamont and the Eden into the sea near Carlisle; but Messrs. Hemans and Hassard propose to tap the lake at its head, and to run the water out through a tunnel under Kirkstone Pass, 7¼ miles long. The promoters of this scheme promise an available supply of 287,000,000 gallons per day. Their conduits would be about 270 miles long, and would discharge into reservoirs at Edgware, capable of containing a fortnight's supply. Pumping would be required to supply the higher parts of London. The total cost of the scheme is estimated at 13,500,000*l*. Concerning this proposal, the Commissioners remark that it is practicable, and that it has the advantage of natural lakes at a high level; but the estimates of cost are even more uncertain than Mr. Bateman's. Every one admits that the rainfall in this district is very abundant, and the quality of the water is satisfactory, subject to the objections already mentioned in the Welsh case. They conclude by observing that the Lake District is a very fine gathering-ground for soft water, but that it ought to be reserved for the manufacturing towns of the North, for whom soft water is particularly valuable, and to whom the region in question geographically belongs.

Mr. Hamilton Fulton proposes to supply London from the upper sources of the River Wye, in Mid-Wales. He points out that no injury would result to local trade from the abstraction of the water, as the navigation is nearly superseded by the railway. His scheme is

about equal in magnitude and cost to that of Mr. Bateman, and the Commissioners are of opinion that it might be further investigated, if any such scheme should be deemed necessary. Mr. Remington proposes to draw water from the Derbyshire hills; but as he does not undertake to supply his reservoirs at Barnet with more than 100,000,000 gallons of water per day, his scheme can only be regarded as of an auxiliary character.

At the present time London is furnished with water by permanent streams—the Lea,* the New River, and the Thames. The schemes above described are intended to substitute a system of artificial water-collection, the water thus collected being delivered by gravitation. Many populous towns in the North of England, owing to the want of a natural source of supply close at hand, either from the small size of their rivers, or from the fact of those rivers being fouled by the discharge of sewage or manufacturing refuse, are now in the condition in which it is proposed to place the metropolis—that is to say, they are dependent on artificial reservoirs. During the year 1868, owing to the unprecedented drought, the capability of these sources of supply was severely tested, and the facts adduced are decidedly of an unfavourable character. In Manchester the inhabitants were urged to economise their consumption, and after the 3rd of August the Corporation limited the supply to the city to twelve hours of the day, stopped the street-watering, and diminished the trade-supplies by one-half. In September a further reduction took place, and many persons were prosecuted for waste. The town was for seventy-six days on short allowance, and for seven days on very short allowance. It is, however, only fair to state that the Corporation had been pushing on their delivery arrangements with the utmost rapidity, while their storage-works were advancing but slowly; consequently, they felt the pinch of the sudden and unexpected drought. Before long, however, their storage accommodation will be doubled. In the smaller northern towns the scarcity was felt still more severely. At Rochdale, after a long period of strict limitation, the store became entirely exhausted, and the town would have been almost without water but that recourse was had to pumping from a colliery in the neighbourhood. At Bury there was a water-famine for five weeks. At Preston the reservoir became practically dry at the end of August, and costly pumping-works were hastily established, which were required for fifty-eight days. Newcastle, Bradford, Halifax, Sheffield, Stockport, Warrington, and many other populous towns, all suffered more or less severely. We may here observe that at Liverpool, Bristol, and Newcastle-upon-Tyne gravitation-works have proved a failure even in ordinary years, and that pumping establishments have been erected to make up for the deficient supply. From these instances it is evidently unsafe to trust to the average rainfall for the supply of reservoirs, unless that average be calculated on a very long series of years. For fifty years there had not been a summer so hot

* Throughout the Parliamentary Blue Book this river, so familiar to the lovers of boating and fishing in North-eastern London, is called the Lee; we prefer the ordinary spelling. The real River Lee, celebrated in Father Mahony's poem, "The Bells of Shandon," runs into Cork Harbour.

and dry as that of 1868, yet it is plain that artificial reservoirs ought to be constructed on the basis of the diminished supply which such exceptional seasons are likely to yield. Moreover, it must be remembered that when the drainage of a large area, such as that proposed by Mr. Bateman in North Wales, is collected into reservoirs instead of being allowed to sink into the ground, we rob the subterranean rocks of their natural supplies, so that if the reservoir runs dry we have nothing to fall back upon. On the other hand, on account of the irregularity of the rainfall, particularly in mountainous districts, it is impracticable to construct reservoirs large enough to store the entire quantity received, so that all large floods occurring when the reservoirs are full must pass away and be lost. Hence *the available average obtainable from reservoirs must fall much short of that deduced simply from the fall of rain.* In contrast to these facts, it is worthy of remark, that during the exceptionally long drought of 1868 the Thames and the Lea seem not to have been diminished in volume below the ordinary flow of dry years—a result entirely due to the equalising effect of the great subterranean stores contributing to their flow.

The Commissioners had been directed to inquire, "whether there are other districts, in addition to the high districts of England and Wales, from which a good supply of unpolluted and wholesome water can be obtained;" and several schemes were submitted to their notice, proposing to supply London from sources of this character. Mr. McClean's plan is to embank and canalise the Thames between Henley and Great Marlow, so as to form in the present channel of the river a long series of impounding reservoirs. From the lowest of these reservoirs, 105 feet above low-watermark in London, he undertakes, by means of a canal thirty-six miles long, to supply London with 200,000,000 gallons per day. Mr. Bailey Denton proposes to go for his supply still farther up the river—namely, to the oolitic sources between Cricklade and Oxford, and to the various streams rising in the chalk, bringing the water so collected by a conduit from Lechlade, 127 miles long. The scheme submitted by Mr. Mylne is less ambitious than any of the foregoing, but more likely to be carried into practical effect. He proposes, by means of impounding reservoirs at Enfield Chase, to increase the daily quantum yielded by the River Lea by 30,000,000 gallons.

Setting aside for the present the important question of the *quality* of the water, it is easy to see, even at this stage of our investigation, that the Thames basin possesses advantages, as a gigantic water-collecting apparatus, to which the mountains of North Wales and Cumberland, in spite of their far wetter climate, can lay no claim. Neither high mountains nor excessive falls of rain are needed to produce great permanent rivers. The giant streams of the Mississippi and the Missouri take their rise in a country but slightly elevated above the sea. The secret of the superiority of the Thames in comparison with the Severn, as a permanently-flowing equable stream, lies in the geological character of the strata in which its numerous feeders take their rise. It is true that one-third of the area of the Thames basin above Kingston consists of impermeable clays; and if

all the river-valley were of this character, the Thames would be an unnavigable stream, for the rainfall, after allowing for vegetation and evaporation, would run off the surface of the soil, and the river would sometimes be a raging torrent, sometimes a chain of shallow ponds. But, fortunately, two-thirds of the area of the Thames basin, or about 2,450 square miles, consists of permeable oolitic limestones, sands, and chalk. The rain that falls on such a soil is at once stored up, and its ultimate delivery through springs to the streams and rivers is spread over weeks and months. The chalk hills of Berkshire and Oxfordshire may be compared to great sponges, whose contents are slowly filtering downwards; and it is reckoned that in some places a shower of rain, falling on the chalk downs, does not reappear in the form of Thames water till sixteen months have elapsed! Many persons, therefore, recommend that, as the Thames itself is liable to pollution, we should go direct to the reservoirs from which he draws his supplies, and pump our water from the chalk. The Rev. J. C. Clutterbuck maintains that the system, if pursued on a large scale, would be ruinous; it would be the old story of killing the goose for the sake of the golden eggs. He says: "You would obtain a certain quantity, but it would be at the expense of the rivers; the rivers would cease to flow. When my advice has been asked I have invariably said, 'Take the water as it flows above ground, and do not tamper with it below.'" In accordance with this opinion, the Commissioners are averse to tapping the natural water-reservoirs *above* London, as by doing so they would simply be robbing the Thames; but they think that *below*-bridge, from the chalk springs of Kent, a large auxiliary supply might be obtained, which now runs uselessly into the sea. Mr. Barlow, for instance, believes that by driving a tunnel parallel with the river, twenty miles long, between Lewisham and Gravesend, 60,000,000 gallons a day might be obtained.

At this point of our survey it will be convenient to give a brief account of the past and present water-supply of London. From very early times there were artificial channels for the conveyance of water. Some of their names still survive, in Lamb's Conduit and White Conduit; but these contrivances were merely employed for utilising local springs, and it was not till towards the end of the sixteenth century that water was systematically pumped from the Thames. In 1581, Peter Morrys, an ingenious Dutchman, erected a waterwheel under one of the arches of London Bridge; which, being turned by the tidal stream, worked forcing-pumps, and so supplied the houses. These London-bridge Waterworks were afterwards greatly extended, and kept up a considerable supply for 200 years. But as Morrys's pumps were too feeble to supply the higher parts of the town, attention was turned inland; and in 1610 the New River, fed by copious chalk springs near Ware, was successfully brought to Clerkenwell by Sir Hugh Myddelton. These sources of supply, aided by local pumps, springs, and wells, kept the metropolis well provided during the seventeenth century; but as building began to extend westwards, new demands arose. In 1691 the York Buildings Waterworks Company was established, to supply water from a point near Charing Cross. In 1720 the Chelsea Waterworks began operations, and by the com-

mencement of the nineteenth century all the present companies were in existence. Till about forty years ago, the water was supplied to the people of London just as it came out of the river. But at that date the rapid increase of population and traffic was beginning to make the water dirty and muddy. The public became alarmed, and a Royal Commission was appointed, who reported that the Thames water was naturally wholesome enough, but that it ought to be cleansed of its filth by filtration. This, after a time, was successfully effected. It was found that if the water was kept at rest in a reservoir the grosser particles were speedily deposited, and the remaining impurities* were removed by letting the water soak through a bed of sand, held up in its place by underlying layers of coarse gravel. Experience showed that the dirt did not sink far in, but formed a thin and easily-removed film on the surface of the sand. In addition to this great improvement, several of the companies moved their point of "intake" higher up the river.

These reforms sufficed for a time, but greater changes were speedily needed. The sewage, which had hitherto been confined in cesspools, was now, by the watercloset system, poured into the river. The once "silver-footed Thamesis" was converted into a common sewer, the filth floated backwards and forwards with the tide, and local steamboats stirred up the mud at the bottom. It became plain that the portion of the stream thus shamefully abused and befouled was no longer fit for a beverage, and in 1852 an Act of Parliament was passed, forbidding the water-companies to draw their supplies below Teddington Lock. Provision was also made that all store reservoirs within five miles of St. Paul's should be covered, and that all water supplied for domestic use should be effectually filtered. The companies expended about 2,500,000*l.* in carrying out these regulations, and four years later a chemical report, drawn up by Government officials, showed that though the hardness and solid contents of the water remained about the same, there was a marked diminution in the amount of organic matter. This improvement was partly attributed to the removal of the intake above the tideway, but partly also to the increased care taken by the companies in the collection, filtration, and general management of the water.

London is now supplied with water by eight companies, five on the north side of the river, and three on the south side:—

1. *The New River Company* supply all Central London: namely, the extensive district which lies between a line drawn northwards from Charing Cross to Highgate, and a line drawn northwards between the Tower and Stamford Hill. The New River is a conduit, recently shortened by cuts to a length of 28 miles, and is fed by copious chalk springs near Ware, and from the River Lea. There are subsiding reservoirs at Stoke Newington and Clerkenwell, covering an area of 43½ acres; filtering reservoirs at Stoke Newington, Hornsey, and Clerkenwell; and high-level reservoirs at Pentonville, Highgate, and Hampstead. This company furnished, in 1867, an average daily supply of 24,000,000 gallons to 113,462 houses, containing 800,000 inhabitants.

* It must be borne in mind that ordinary filtration has little or no effect on impurities held in *chemical solution*.

2. *The East London Waterworks Company* supply all the metropolitan region which lies to the east of the New River district, as far as North Woolwich and Woodford. They draw their water from the Lea near Walthamstow, where they have a reservoir occupying 110 acres. They furnished, in 1867, 19,000,000 gallons per day to 92,652 houses, containing 675,000 inhabitants.

3, 4, 5. The *Chelsea*, the *West Middlesex*, and the *Grand Junction Waterworks Companies* supply the whole of London on the Middlesex shore westwards of the New River district. They draw their water from the Thames near Hampton, and possess reservoirs at Hampton, on Putney Heath, at Kensington, Primrose Hill, and Bayswater. In 1867, they collectively furnished 26,000,000 gallons of water per day to 90,946 houses, inhabited by 690,000 persons.

6, 7. The *Lambeth*, and *Southwark & Vauxhall Companies* supply the whole of the Surrey side, the south-eastern suburbs excepted. They furnished, in 1867, about 22,000,000 gallons of water to 109,878 houses, inhabited by 695,000 persons.

8. The *Kent Waterworks Company* supply Deptford, Greenwich, and Woolwich, and extend their operations as far as Dartford, Bromley, Chiselhurst, and Bexley. They draw their supply from wells sunk into the chalk. This water does not need to be filtered. In 1867 they furnished 34,504 houses, inhabited by 240,000 persons, with 6,468,873 gallons of water per day. Besides these supplies, there are wells, 400 feet deep, sunk into the chalk near Charing Cross, which furnish the government offices and several public establishments, including the Trafalgar Square fountains, with 430,000 gallons per day. The total average daily supplies to the whole of London amount to about 98,000,000 gallons, but this amount is increased to 108,000,000 gallons during the summer months. The water is distributed on the *intermittent* system. The supply-pipes to the houses are not attached to mains in which the water is always under pressure, but to smaller service-pipes, into which the water is "turned on" during one or two hours of the day. The quantity required for the day's consumption is stored in cisterns provided by the inhabitants. On Sundays, as a general rule, no supply is given, except by some of the companies in poor neighbourhoods, where the receptacles are insufficient.

An Act, passed in 1866, empowered the Thames Conservancy Board to provide for the effectual scavenging of the Thames, in order to the removal therefrom of substances liable to putrefaction, up to Cricklade in Wilts, and also forbade the introduction of sewage or other injurious matter into the Thames and its tributaries. During the drought of 1864 the East London Company found reason to distrust the capability of the River Lea, and subsequently applied to Parliament for leave to draw 10,000,000 gallons a day from the Thames at Sunbury; but as, about this time, a severe outbreak of cholera at the East-end had caused a suspicion that the Lea water was unwholesome, a general inquiry took place into the operation of the Metropolis Water Act of 1852. A Committee of the House of Commons reported satisfactorily on both the quality and quantity of the Thames water, but stated that the water of the Lea, though naturally whole-

some, was liable to serious contamination. We shall return to this question hereafter; our present business must be to ascertain the *quantity* of water likely to be obtainable from the basin of the Thames.

The Thames first assumes importance near Lechlade, in Wilts, where a number of small streams unite. From this point down to Ditton it follows a tortuous course of about 120 miles, being joined by several considerable tributaries. The average rainfall of the Thames basin is estimated at 27¾ inches, and of this one-third flows down the river. The total discharge at Kingston is found to average 1,350,000,000 gallons per day, while in time of flood this amount is increased to 20,000,000,000 or 25,000,000,000 gallons; but the really important point is to ascertain *the lowest flow* in times of protracted drought. The evidence of a number of witnesses tends to show that a daily flow of 350,000,000 gallons is a very exceptional thing, occurring only for a few days in the course of many years, and the experiments leading to this conclusion have been taken at a point *below* the water-companies' intake. The companies at present are empowered to abstract 110,000,000 gallons per day, and the testimony of a number of witnesses proves clearly that, with proper storage-works in the upper reaches of the river, double that quantity might be taken in the driest weather without any perceptible diminution of the volume of the stream. From the valley of the Lea no material increase can be expected, and the Commissioners fix the maximum contribution of that river to the metropolitan water-supply at 50,000,000 gallons per day. As already stated, they object to tapping the chalk springs which supply the Lea and the Upper Thames, but they think that 30,000,000 gallons might be obtained from those Kentish and Essex springs which now run uselessly into the river. Altogether, it is calculated that, with proper arrangements, the basin of the Thames might be made to yield 300,000,000 gallons per day, or nearly thrice as much as is needed by the existing population.

But if the Thames water is unfit to drink, the quantity available matters little. It becomes, therefore, necessary to examine into the *quality* of this water. The evidence on this point is not so satisfactory as we might expect from the advanced state of physical science; indeed, the skilled witnesses differ so widely among themselves, that occasionally the Commissioners have been obliged to decide without regarding their evidence. In treating of the chemical characteristics of waters, a broad distinction must of course be drawn between the *mineral or inorganic contents*, such as metallic and earthy salts, which, in the case of river-waters, are found present in their first sources; and *the organic contents*, which become added to the waters by accidental circumstances during their flow.

A gallon of water contains 70,000 grains, and in a gallon of the Thames water, as supplied by the companies from Hampton, there are usually from fifteen to twenty grains of mineral salts. More than half of this solid matter is carbonate of lime; the rest consists of sulphate of lime, with salts of magnesia, soda, potash, and silica, and traces of alumina and iron. The presence of these salts causes what is commonly called *hardness*. Perfectly soft water is unknown in nature, but the water derived from non-calcareous rocks, such as that supplied

to Glasgow from Loch Katrine, is, for all practical purposes, regarded as soft, while that derived from the chalky basin of the Thames is invariably hard. The question now arises, "Which is to be preferred, soft water or hard?" For the purposes of drinking, the balance of evidence appears to incline in favour of moderately hard water of 14 grains or degrees of hardness, such as is supplied by the London companies. Four-fifths of the inhabitants of the globe live in hard-water districts, and there is no proof that diseases are caused by this quality of their daily beverage. On the other hand, the presence of the carbonate of lime imparts a briskness and brilliancy to the water which renders it more generally acceptable to those who drink it. Again, as has been already stated, the London water exercises no perceptible effect on lead or iron, whereas soft waters have, in many instances, been found to corrode these metals; and though, in the towns using soft water (such as Manchester and Glasgow), no pernicious results are distinctly traceable to this cause, it is probable that waters thus impregnated with a poisonous metallic ingredient do exercise a deleterious influence on health. Further, hard water, when kept in cisterns and reservoirs, is less liable to decomposition than soft—a matter of great importance to a city like London, which is supplied on the intermittent system. On the whole, then, for drinking purposes, hard water seems quite as good as, if not better than, soft water.

Thus far, we have treated of the Thames water in its unboiled state; we must next regard it from a culinary point of view. If the river-water retained the whole of its mineral salts after boiling, such an amount of hardness would, no doubt, be a serious defect for cooking purposes; but the greater proportion of the salts are got rid of by boiling. By an hour's boiling, for instance, the hardness of the West Middlesex water fell from 14·6 to 5·5 degrees, and that of the New River from 14·7 to 4·1 degrees. Good chemical reasons can be given for this phenomenon. A gallon of perfectly pure water, when exposed to contact with chalk, is able only to take up two grains of carbonate of lime; and the larger amount with which it is usually found impregnated, after percolation through calcareous strata, is due to the carbonic acid gas which it has imbibed, and which is an eager solvent of lime. Boiling drives off the gas, and all the carbonate of lime, except the two grains already spoken of, falls to the bottom. Hence the incrustations familiar to all persons who are conversant with London kitchen-boilers. This deposit, it must be confessed, is to some extent a nuisance, but it is of a loose incoherent character, and therefore easily removed. Thus, it appears that the hardness of *boiled* Thames water is reduced to such a small degree, that it causes no practical inconvenience. With regard to the infusion of tea, a topic in which everybody is interested, the majority of witnesses concur in preferring the water of the Thames to the softer water of the northern cities. The soft water is *too pure*, if the expression may be used; it makes a darker-coloured and apparently stronger infusion, but this is because it dissolves a quantity of bitter extract, which to most persons is rather distasteful than otherwise. To obtain a really delicately-flavoured beverage, the water, which in London should be allowed to stand for five minutes on the

tea-leaves, should in Manchester only be allowed two minutes. For the same reason, brewers of pale ales object to use soft water, because too much of the colouring-matter of the grain would be extracted; but for dark-coloured beers, such as porter, soft water is said to be preferable. For culinary purposes, then, there appears to be no valid reason for abandoning the water of the Thames, but for washing and manufacturing purposes the indictment against hard water is less easy of resistance. Everybody knows that hard water curdles soap, and the soap thus curdled is, for detergent purposes, wasted. The calculations made to prove this fact are often, however, very erroneous, and the loss of soap by the use of hard water is represented as being much more formidable than it really is; still, there can be no doubt that considerable loss is incurred, and if London were a manufacturing city, the objection would be very serious. But the amount of manufacturing industry in the metropolis, of a kind to demand large supplies of soft water, is exceedingly small in proportion to the population, and the softening influence of boiling largely diminishes the evil. Moreover, to such exceptional cases, a simple and efficient softening process, invented by the late Dr. Clark of Aberdeen, is applicable. The cost of this process amounts from 20*s.* to 27*s.* per million gallons. It might be adopted by the existing water-companies; but there are several practical difficulties in the way of undertaking it on a large scale, and it would be unwise to waste money in softening the enormous body of water which is used for sewer-flushing and street-watering purposes. Even for manufacturing purposes, it is not quite clear that soft water is such an entire necessity. The great silk, woollen, and cotton industries of France are situated in hard-water districts, and an eminent French chemist has shown, as the result of his researches, that waters of a certain degree of hardness are preferable for dyeing purposes, because they produce a greater brilliancy of colour.

If there were no impurities in the Thames beyond these inorganic mineral matters—which are not fairly reckoned as impurities, seeing they are more or less prevalent in all natural waters—the question of the wholesomeness of the water now supplied to London would be very easily disposed of. But there is a population of nearly 900,000 persons dwelling on the banks of the Thames and its tributaries above Hampton: a large proportion of the sewage-matter arising from these persons, and the domestic animals which they keep, is poured either directly or indirectly into the river; and as the greater part of the Thames basin is highly cultivated, much of the rainfall before reaching the river passes over manured land. There can be no question that the Thames receives these artificial additions, but it is extremely difficult to decide to what extent they are removed by natural processes of purification, or how far the unpurified residuum (if such there be) is injurious to health. On these important topics a great divergence of opinion exists among men of scientific eminence, and the chief reason for this divergence of opinion is that chemical analyses, however carefully conducted, are at present unable to supply us with any trustworthy data. One thing is certain, everybody would prefer to drink water into which sewage has never been poured, if he

could get it to drink; and it is not pleasant to think that the inhabitants of London do undoubtedly use that water as a beverage into which the inhabitants of the upper reaches of the stream have cast their excrementitious refuse. The idea is not an agreeable one to contemplate, yet the actual mischief is greatly diminished, if not altogether abrogated, by beneficial natural agencies of self-purification.

Before explaining the manner in which this cleansing is effected, let us cite three striking examples of the rapidity with which running streams get rid of the filth which they hold either in chemical solution or in mechanical suspension. "Nothing can be fouler, probably," says Mr. Hawksley, "than the state of the water at Sheffield, whereas if you go down to Doncaster, the water is supplied by the waterworks, and is actually drunk in the town. Again, the Irwell, on leaving Manchester, receives the Irk, the Matlock, and all the refuse of the manufacturing population for a great many miles; when it travels down only eight or nine miles to Warrington, it is perfectly changed—it ceases, or nearly ceases, in that short distance to be an offensive river. At Leicester the water was as black as this ink. I do not mean to say that it was absolutely so thick, but looking at it in a mass it was as black as ink—nothing would live in it, and the smell was abominable; but by the time it got to Loughborough, twelve miles lower down, it was entirely restored to its pristine condition. You could stand on the bridge there, and see the fish swimming among the beautiful reedy and other plants growing in the water just as in the purest stream." This apparently miraculous alteration is effected partly by fish and other animal life, partly by the growth of aquatic vegetation, but still more by chemical action. The organic compounds dissolved in the water appear to be very easily decomposed, and the great agent of this decomposition is oxygen, which is always abundantly present in running water. The passage of the water over weirs, as is frequent in the Thames, causes further agitation and aëration, and makes the purifying process go on more rapidly and effectually. By this oxidising process the organic matters are completely deprived of their original constitution, their elements are rearranged into permanent inorganic forms, innocuous and free from any deleterious quality. If we could be quite sure that this process was completely effected by the time the stream reaches Hampton, there would be no question as to the wholesomeness of the Thames water, but it is, unfortunately, just on this point that skilled witnesses differ so widely in opinion. Dr. Lyon Playfair says: "The organic matter coming from drainage is a most formidable ingredient in water: it becomes insoluble much more slowly than mere vegetable matter, such as that arising from a peaty district, and the presence of the most trifling oxidised form of organic matter, when it passes into the stage of nitrate, is, I think, sufficient to condemn the water, because you are never sure whether it has fully passed into that stage." And when the Commissioners asked Dr. Playfair, whether by the time the Thames water reaches the delivery-pipes, all organic matter is converted into the state of nitrates and nitrites, he replied, "that the evidence from the cholera outbreak of 1866 was, in his opinion, conclusive,

that all the matter was *not* so converted. Mr. Simon, medical officer to the Privy Council, observes that chemists are totally unable to demonstrate the fatal influence that a water may have. Instead, therefore, of handing a sample to a chemist, and asking him, "Is this wholesome water?" he would guard the supply with the utmost strictness against every foul admixture. Chemists might be powerless to detect the presence of sewage seven miles below the point at which that sewage had been discharged into the river; but tapeworm-eggs might be alive seven miles down, and, assuming that the contagia of typhoid fever and cholera are living germs, those germs might be alive seven miles down. It is evident that the analyst is powerless in such a contingency. Even if he could recognise these supposed cholera-eggs, the chances would be a million to one that in drawing his sample, he would hit on the particular half-pint of water in which they were floating, yet that half-pint of water might convey death to a whole district. The supposition is terrifying enough; we can but hope and believe, from the beneficent agency of nature in kindred matters, that it is baseless. Sir Benjamin Brodie thinks these important questions are more likely to be satisfactorily answered by medical statistics than by chemical experiments. He cites the analogous case of the atmosphere, which may be regarded as a great gaseous ocean, and points out that although no one can doubt the injurious effects of certain gases and other organic matters in the atmosphere, chemical analysis is absolutely impotent to reveal their presence, on account of their extreme dilution. "Take the case," he says, "of the Westminster drain, the opening of which is known to have occasioned a great outbreak of fever. You say that you would not live in a house next it, nor at the end of the street, nor at the end of the next street; but where should you begin to live so as to be safe from the effluvia of that drain? We cannot answer that question. I suppose if I get to Oxford I am safe from that drain; but I have no chemical tests which I can apply, to prove that the Westminster drain-poison is not in the Oxford air."

Dr. Frankland, Professor of Chemistry in the Royal Institution, is decidedly unfavourable to the Thames water. He says: "I cannot, of course, trace any direct connection between the present supply and the health of the metropolis; but I consider that water contaminated with sewage contains that which is noxious to human health. There is no process practicable on a large scale by which that noxious material can be removed from water once so contaminated, and therefore, I am of opinion that water which has once been contaminated by sewage or manure-matter is thenceforth unsuitable for domestic use." He then proceeds to speak of the nitrates and nitrites, which he regards as "the skeleton of the sewage which has previously been poured into the water." Strangely enough, this so-called "skeleton of previous sewage" is thrice as abundant in the water of the Kent Company, drawn from deep chalk-wells, as in the water of the Thames or the Lea; and when we add that these nitrogenous salts exist in a far larger degree at the pure head-waters of the Thames at Lechlade than they do at Hampton, it is evidently an error to consider them as entirely the result of decomposed sewage. Nitrogenous compounds

are, in fact, not peculiar to animal substances. They are present in a great number of plants: they are found in the soil, and in springs. M. Boussingault, the distinguished French chemist, has shown that there is more nitrogen in soil taken from forests and the untilled tops of mountains than in highly-manured cultivated ground. This view is upheld by Dr. Miller, the Professor of Chemistry at King's College. Dr. Parkes proposes to divide potable waters into several classes, and would rank the London water as No. 3, or "suspicious." He would call any water containing large indications of nitrates and nitrites "suspicious" water. Dr. Letheby, on the other hand, pronounces the present supply of water to London "a thoroughly wholesome water;" and Mr. Wanklyn gives the following opinion as the result of a prolonged examination: "The water of the Thames at Hampton Court, where the companies draw their supply of water, is not very good, as it exists in the river; but after the filtration effected by *some* (but not all) of the companies, it becomes excellent, and, in point of purity from organic nitrogenous matter, is then fully equal to the water supplied to Manchester, Edinburgh, or Glasgow. The water supplied by the New River Company is also very good." It is important to observe here that the scientific analyses show the Thames to be "chemically purer at Hampton than at any other part of its course." This is attributed to the influx of the Wey at Weybridge, a river draining a district of greensand and London clay, and therefore bringing down less carbonate of lime. Much good is expected to arise from the Conservancy Act of 1866, which forbids the up-country towns from emptying their sewage into the Thames; though, no doubt, even when the sewage is poured, for manuring purposes, upon the land, some of its noxious ingredients may still pass into the river. Sir Benjamin Brodie observes: "Although the water from land thus sewaged may run out bright and clear, I should not like to drink a glass of it, still less to make it my daily beverage." The water from the valley of the Lea closely resembles that of the Thames, and therefore nothing further need be said of it here, except to remark that to this water the severe outbreak of cholera at the East-end of London, in 1866, was by some persons confidently attributed. The official inquiry which afterwards took place cleared the upper portion of the Lea, whence the supplies of the East London Company are ordinarily taken, from this odious imputation; but it appears that, by some faulty arrangement, the foul waters of the lower part of the river were admitted into the reservoir at Old Ford. Captain Tyler, in his report, admits that a case of grave suspicion exists against the Old Ford water, but declines to join the memorialists in asserting that this water was "the principal, if not the sole, cause of the fearful mortality from cholera." As no witness maintains that the Thames water is perfectly wholesome, unless carefully filtered, it is a matter of regret that filtration is often so imperfectly performed. The Registrar-General, in his Report for 1867, complains of the turbidity of the water supplied by some of the companies. In this respect the Southwark Company has a bad pre-eminence. The water supplied by them last winter is described to have been of the colour of London fog. This turbidity is partly due to careless filtration, partly to the

muddiness of the River Mole, which joins the Thames at their point of intake. Mr. J. Netten Radcliffe, who has prepared a valuable special report on this subject, recommends that the filter-beds should be placed under official inspection. It will be seen that the evidence concerning the quality of the Thames water is somewhat conflicting; nevertheless, we think that the Commissioners are justified in arriving at the following conclusion: "The Thames water has many good qualities, which render it peculiarly suitable for the supply of the metropolis, and which give it, in some respects, a superiority over the soft waters usually obtained from high gathering-grounds. *When properly filtered*, it is clear, bright, and colourless, agreeable and palatable; and the amount and nature of its saline ingredients are considered by many to contribute to its general acceptability for drinking. It is well aërated, has good keeping qualities, and is unusually safe as regards action on lead and iron."

The main question may now be considered as settled: the various indictments brought against our great metropolitan river, both on account of deficient quantity and defective quality, have been satisfactorily disposed of; and the fact remains clearly established that we do well to make use, under proper precautions, of the unrivalled water-reservoir which pours its ample flood through the midst of our streets. But some persons may say, "Though there may be enough water in the Thames to supply the present population, will there be enough some twenty or thirty years hence?" In order to reply to this very pertinent question, we must endeavour to estimate the probable future population of London, and also assign the quantity of water to be allowed to each individual. The population of London, which in 1861 amounted to 2,803,034 persons, was estimated in 1867 to have increased to 3,082,372 persons. Mr. Bateman, judging from the rate of increase which has prevailed since the beginning of the century, thinks that twenty years hence the population will amount to 4,500,000, and that the demand for water will be so increased, when it is supplied to everybody on the "constant" system, that ultimately not less than 230,000,000 gallons will be required. Mr. Hawksley, on the other hand, thinks that London is not going to increase so fast for the future as it has done of late years: the introduction of the steam-engine, of railways, and of machinery has caused a rapid increase of population, but the stimulus will not continue. Statistical facts tend to support this view. During the sixty years between 1801 and 1861, the population of London increased by 1,845,120. Of this increase, 557,920 were due to excess of births over deaths, and 1,287,200 to immigration. The increase by immigration is diminishing: in the first ten years of the above-named period it was 17¾ per cent.; in the last ten years it was only 8 per cent. Altogether, the Commissioners think that more than twenty years must elapse before the population reaches 4,500,000, but, in order to be on the safe side, they assume an ultimate population of 5,000,000.

With regard to the quantity of water required by each individual, it is found that 10 gallons per head per day are enough for ordinary domestic requirements, including waterclosets: to this must be added another 10 gallons for street-watering, sewer-flushing, trade purposes,

&c.; and probably another 10 gallons must be added for downright waste. If the "constant" system be introduced, the quantity of water used, especially at first, will no doubt be increased; but the Commissioners calculate that the maximum summer consumption of 5,000,000 persons, on the most liberal estimate, will not exceed 200,000,000 gallons; and as a proof that there is no occasion for uneasiness, the existing companies are prepared, with their present legal powers, and with only moderate additions to their present engineering means, to supply 180,000,000 gallons per day. This, as has already been shown, is far below the quantity capable of being furnished from the Thames basin.

We must now touch briefly on a subject of extreme interest to every inhabitant of London—namely, the question of a *constant* water-supply at high-pressure, as opposed to the present *intermittent* system of supply at low-pressure. The "constant service" system, which is now adopted in many country towns, possesses several undoubted advantages. The water can always be drawn fresh from the main, instead of being suffered to stagnate in cisterns, which, in the lower class of houses, are frequently fouled with every species of impurity; and in case of fire, the mains are always charged without the intervention of the turncock. Indeed, the constant system, at first sight, appears so simple and easy that one may reasonably wonder why it has not long since been universally adopted in London. But there are several formidable difficulties in its way. Plumbers' fittings are notoriously defective, causing great leakage. This leakage at present only lasts while the water is turned on; but if it were continuous, the waste would be enormous, and the price of water would be materially enhanced. Secondly, the strength of the existing lead-pipes would be unequal to the constant strain induced by high-pressure. Thirdly, the great demand for water in London occurs at one particular time, between 9 and 11 o'clock in the forenoon. This sudden demand is, on the intermittent system, supplied by the cisterns; but if constant service were adopted, it would come directly on the mains, and would compel those companies who have no store-reservoirs to increase their pumping power. Fourthly, unless the size of the main and service pipes were increased all over London, this sudden morning draught would deprive the houses in the higher districts, and the higher floors of all houses, of any water whatever just when they most needed it. Fifthly, an accident to a main pipe—and such accidents are constantly occurring—would, unless cisterns are retained, deprive a whole district temporarily of water. And if cisterns are retained, one of the chief benefits of the constant system would be lost.

We will now examine more particularly some of these alleged difficulties. People in the better class of houses are certainly well served under the present system, and, barring occasional inconvenience during periods of severe frost—an inconvenience which would not necessarily be abolished by constant service—have little to complain of. It is the poor crowded neighbourhoods which are the worst off. Their cisterns are often so filthy, that if the unfiltered river-water from London Bridge could be pumped directly into their pails and cans, they would gain greatly by the exchange. In fact, it seems absurd to

analyse the water so critically at Hampton, and then suffer it to assume so foul a condition just when the poor want to use it. It is as if we were to enforce the most stringent rules against adulteration by brewers, and then permit beershop-keepers to sell any doctored stuff they pleased. But, unfortunately, it is just in the poor neighbourhoods that difficulties arise—difficulties which are almost insurmountable, because they arise from moral rather than from physical causes. The New River Company, for example, have repeatedly offered to furnish the houses of the poor with a constant supply, if the landlords of such property would only take water in some way that would insure the company against waste. But what can the landlords do, when, as in many low neighbourhoods, their tenants are ready to steal every bit of brass, copper, or lead that will fetch a penny at a marine-store shop? Something, it is true, may be done by mechanical contrivances for reducing the rapidity of the constant supply. Mr. Greaves, who has had considerable experience of the "constant service" system, adopts the following plan. Somewhere in the pipe, between the company's pipe and the consumer's cistern, a disc with a small hole in it is placed, so as to prevent the water being drawn beyond a certain speed. Supposing the pipe, thus choked, yields only a pint a minute, Mr. Greaves reckons that the consumer cannot take from him more than 180 gallons a day. But it is evident that this plan presupposes the continuance of cisterns with all their evils, for otherwise a housemaid would have to stand sixteen minutes while the water was dribbling into her two-gallon bucket, and a universal chorus of grumbling would ensue. In Glasgow, owing to carelessness and bad fittings, the waste of water is enormous—the people consume 50 gallons a day per head; but the Corporation view the matter with equanimity, holding that Loch Katrine is practically inexhaustible, and that the abundant flow tends to sweeten the dirty Clyde. In the face of all these difficulties, and the great expenses which would be incurred by landlords in providing for the new state of things, it is our opinion that a long time will elapse before the constant system is adopted in London. The Commissioners advise that "earnest and prompt efforts should be made to introduce it as widely as possible;" but they think that it cannot be effectually carried out so long as the supply remains in the hands of private companies. It appears to us that it would be a great boon to the inhabitants of the poorer districts if, instead of attempting to supply every house by the constant system—which would, we fear, be impracticable—an abundant supply of *public stand-cocks* and *street fountains* were provided, the expense being charged on the owners of the adjacent property. If such fountains were supplied in large numbers, one at least with half-a-dozen separate taps attached to it in every court, the water being attainable at all hours, Sundays and weekdays alike, there need be no scuffling or dawdling round the receptacle, and the poor would get a much more wholesome and palatable water than they get at present. But in any case there will be difficulty, and the difficulty is chiefly caused by the dishonesty and savagery of a minority, by whose misdeeds the majority of respectable and well-conducted poor people are compelled to suffer a daily penance.

The supply of water was in old times regarded as an essentially municipal function, and several of our larger towns—such as Liverpool, Manchester, and Glasgow—have recently resumed the ancient principle. Three-and-twenty years ago, Manchester was so miserably supplied that the Corporation obtained from Parliament the power of levying rates. Extensive works have been carried out, and the town is now furnished, at a cheap rate, with plenty of good water—for the scanty supply of last summer must be regarded as exceptional. This reduction is chiefly effected by their extensive rate-levying powers. A compulsory rate of 3*d*. is levied on all property within the city. For this rate no water is specially supplied; it is a contribution by the whole community, in return for the advantages they obtain by protection in case of fire, cleaning streets, and flushing sewers. Then a second rate of 9*d*. in the pound is levied on all houses, whether they take water or not, but in point of fact they do all take it. Water is further supplied for manufacturing and trade purposes, at prices agreed upon by the Corporation. The Commissioners recommend the adoption of this system by the metropolis, observing that as "no trading company should be permitted to levy or expend such compulsory rates, the future control of the water-supply should be entrusted to a responsible public body, with powers conferred on them for the purchase and extension of existing works, and for levying the rates referred to. This plan offers the only feasible means of introducing efficiently the system of constant supply, and for securing a compulsory supply to the poor; we believe that it would tend to economy, to the improvement of the quality of the water, and to ensure the proper provision for public objects, and for extinguishing fires; and that it would increase the probability of beneficial results from the purification of the Thames."

These are desirable objects of attainment, but we doubt whether such a resolution will be carried out for a long time to come. In the first place, the need is less urgent—we are by no means, as regards water-supply, in the deplorable condition of Manchester in 1845; and, secondly, London is too vast an aggregation of people to possess any corporate spirit. If the control were undertaken by a corporate body, there would be danger of jobbery; if by the State, there would be danger of remissness. Pecuniary interest causes the existing companies to be brisk in providing for the supply of newly-built districts, and it is questionable whether any public body would display such activity.

The result of this inquiry is altogether decidedly satisfactory. It is clear that we have no need to go to Welsh or Cumberland mountains for our water; that, owing to its peculiar geological formation, the basin of the Thames is probably *the most trustworthy natural reservoir of water in England;* and the water so supplied, owing to its natural excellence, and its self-purifying powers, may, *when properly filtered*, be regarded as *wholesome for drinking*, *convenient for cooking*, and *not unsuitable for manufacturing purposes.* If we can only ensure careful filtration, and get rid of the cisterns in poor districts, giving them a constant supply protected by waste-preventers, few other causes of complaint would need to be redressed.

ARTHUR LOCKER.

PROGRESS OF AUSTRALIAN NATIVE INDUSTRIES.

THE commercial value of the Australian colonies to Great Britain is significantly illustrated by the present extensive amount of trade carried on between the two countries. In the memorial of the Australian Conference on postal communication with Great Britain, published a year or two ago, it was stated that within the last sixteen years the two colonies of New South Wales and Victoria have produced a supply of gold amounting in value to 150,000,000*l.* sterling, five-sixths of which has been the produce of Victoria alone. The one colony of New South Wales has raised from the earth 4,617,100 tons of coal, valued at 2,742,224*l.*; and her coalfields, north and south of the port of Sydney, may be said to be inexhaustible. In ten years the colony of South Australia has exported copper to the value of 4,751,638*l.*, while the produce of her cornfields is unsurpassed by other countries. The colony of Queensland, in addition to her pastoral and mineral wealth, has established by successful experiment her capability of growing both cotton and sugar. Nor are the resources of Tasmania unimportant to the British Empire. Her wool, grain, and timber, with the oil of her whale-fisheries, form valuable items of Australian exports. In the year 1865 the exports of the six associated colonies in five articles of production, which are selected for their conspicuous value to the world, amounted to more than twenty-one millions sterling—viz., wool, 8,149,635*l.*; gold, 11,165,811*l.*; grain, 1,335,748*l.*; copper ore, 618,472*l.*; coal, 274,303*l.* The imports into the six colonies in 1865 amounted to 34,936,987*l.*; and although this includes the intercolonial trade and the imports from foreign countries, by far the greater part of this seaborne commerce assists in sustaining the manufacturing power of the United Kingdom. The shipping returns of 1865 for the Australian colonies give an aggregate of arrivals amounting to 1,969,091 tons, and 2,017,724 tons as the aggregate of departures. The leading colonial exports to Europe consist of wool, gold, tallow, copper, and hides. A very large intercolonial trade is also carried on, not only in these articles, but in others likewise. Recently, too, Australian commercial enterprise has succeeded in reaching the shores of India and Japan, colonial-bred horses and colonial-grown timber finding a ready sale in the former country. Still, the principal export trade of the colonists is that carried on with the United Kingdom, the leading commodity being

WOOL,

of which we imported from Australia, during the eight months ending August 31, 1869, no less than 124,772,110 lbs. The number of pounds imported in 1868 was 155,745,499; in 1867, 133,108,176; and in 1866, 113,773,694. In 1854 the quantity imported was 47,489,650 lbs. The rapid development of the antipodean wool-producing industry, especially as compared with that of our other dependencies, is shown by the following table:—

IMPORTATIONS OF WOOL AT DECENNIAL PERIODS INTO THE UNITED KINGDOM, FROM INDIA, THE CAPE, AND AUSTRALIA.

	India.	The Cape.	Australia.	Total.
1842	4,246,000 lbs.	1,265,000 lbs.	12,979,000 lbs.	18,480,000 lbs.
1852	7,880,000 „	6,388,000 „	43,197,000 „	57,465,000 „
1862	17,959,000 „	18,930,000 „	71,339,842 „	107,928,842 „

In 1850, New South Wales exported 32,361,829 lbs. of wool. On the separation of Victoria in 1851, the quantity sank to 15,269,317 lbs.; remaining pretty much the same until 1859, when the separation of Queensland produced another decrease; yet so extensive were the wool-producing resources of the colony, that in 1866 the exports amounted to 36,986,685 lbs. In 1867, the quantity sank to 21,708,902 lbs. It has since recovered something like the proportions of 1866.

In 1861, Victoria sent us wool of the value of 2,095,264*l.*; in 1868 the value had risen to 4,567,182*l.* In 1860, Queensland exported wool of the value of 444,188*l.*; in 1868, the value had become more than doubled, being 1,057,211*l.* Tasmania, in 1864, exported 17,496,551 lbs.; in 1867 the quantity had risen to 22,633,792 lbs. The increase in the number of sheep is something extraordinary. In Queensland, whose vast pastoral districts form the paradise of the Australian sheep-farmer, the number of sheep in 1867 was 8,655,757; in 1860 it was not half that number, being only 3,166,802. In New South Wales the number of sheep in 1867 was 13,909,574. The other colonies tell a somewhat similar tale. Some of the sheep-farms—or "runs," as they are usually called—are on a most extensive scale, especially in the Riverine district of New South Wales, and in Queensland. One of these runs, mentioned by Mr. Westgarth, bordering the Darling, possessed a frontage of thirty-five lineal miles along that river, with a back area of 800 square miles. As the tide of population sweeps onward, the sheep-farmer—or, more properly, "squatter"—is driven farther and farther into the interior, in search of fresh pastures, where he may feed his flocks without paying more than a nominal rent, if any, to the Government for the use of the waste lands occupied by him.

Sheep-farming must sometimes be far more profitable than even gold-mining. Mr. Baker, Inspector of Factories, mentions the case of a Queensland squatter, who commenced his pastoral career when the almost tenantless acres of the infant colony were considerably cheaper than they are at present, although the price of land still remains incredibly low. He began with a capital of 3000*l.*, chiefly borrowed money, and which was charged with the usual colonial interest of 10 per cent. per annum. With this he purchased 2000 ewes and 30 rams. At the end of fourteen years he found himself possessed of 82,288 sheep, the market value of which, added to the proceeds of the sheep and wool disposed of by him during the previous year, made a total of 113,000*l.*, in place of the original 3000*l.* In this way is it that many of the Australian sheep-farmers become millionaires. But sometimes their prosperity is more seeming than real. The lending of money for sheep-farming purposes has become quite a profession at the antipodes, and a considerable number of the Australian squatters are hopelessly in debt to the colonial banks—the

profits of the year scarcely enabling them to pay the interest due on their borrowed capital. The existence of such a state of things constitutes one of the gravest dangers besetting the future industrial progress of the colonies. The number of sheep in Australia at the present time is computed to exceed 40,000,000. These useful animals are chiefly the descendants of eight merino sheep imported into Sydney, in 1797, by Captain John Macarthur. "That eventful step," says Mr. Westgarth, "was the first systematic effort towards an Australian wool trade." No wonder that the grateful colonists to this day regard the name of John Macarthur as that of one of their greatest benefactors. The immense extent of some of the sheep-farms causes the washing and shearing of sheep to be conducted on a really gigantic scale. On the Yanko sheep "run," or station, in the Riverine district, owned by Messrs. Wilson Brothers, there are nearly 200,000 sheep. The station is said to be the largest in Australia, and comprises an area of 300,000 acres. Here machinery has been erected, by means of which 3000 sheep can be washed daily in hot and cold water. The shearing-shed is 200 feet long and 40 feet wide. It is constructed of pine, the roof being of galvanised iron. In this place, in 1868, no less than 180,000 sheep were sheared, the men employed in and about the shed numbering over a hundred. Thirty horsemen were likewise employed for mustering the sheep. The number of sheep sheared daily during the season, in 1868, averaged 4000. The sum paid for shearing, at 18s. per 100, was 1215*l*., while the extra hands employed, including the sorter, would raise the sum to several hundreds more. The clip was calculated at 1200 bales of 300 lbs. each, forming a total of 170 tons. When the stations are situated in the interior, the transport of the wool to the nearest town, or railway, is frequently a labour both troublesome and expensive. It is conveyed by means of bullock-teams, each laden with from twelve to twenty bales, secured by ropes or straps of fresh hide, and covered with tarpaulins. Ample stores of provisions have also to be taken, the journey sometimes occupying several days—the men and cattle travelling by day, and resting in rudely-formed camps at night. The exportation of wool commenced with a single bale in 1807. In the earlier years of wool exportation, very little care was taken by the colonists with respect to the packing. The fleecy material was compressed to an extent and in a manner which seriously impaired its market value. Proper machinery is now employed, but complaints are still to be heard of the imperfect cleansing. The colonial-exported wool is sold, principally in London, by public auction, the sales taking place once in every three months. These sales commenced in 1817, at Garraway's, with a few bales. Since then they have gradually increased in magnitude, and now it is seldom that less than 3000 or 4000 bales are disposed of in a single day. As the sales increased in importance, the auctioneers had to leave Garraway's for the Hall of Commerce, now the Consolidated Bank, from whence they migrated in 1854 to Moorgate-street Buildings. The quantity of wool exported from Australia during the first three months of 1869 was 34,546,516 lbs., against 11,454,296 lbs. and 16,856,581 lbs. during the corresponding periods in 1868 and 1867.

The extraordinary cheapness and abundance of Australian wool has led to the establishment of several colonial woollen factories, in which large quantities of good tweed-cloth are annually manufactured. In New South Wales the number of such establishments is five, producing 175,348 yards of cloth per annum. The trade was for a time affected adversely by the increased rate of wages consequent on the gold discoveries, and it is only within the last four or five years that the mills have got into full working order again. In Victoria the woollen-cloth factories of Geelong are gradually taking the lead, and everywhere, even in Tasmania, there exist indications that colonial-manufactured cloth will, at no distant period, become a staple article of Australian export. From wool and woollen cloth, we proceed, by a natural transition, to the subject of

Tallow,

of which a large quantity is annually sent from the colonies to Europe. Indeed, so great is the number of sheep in Australia, and so excessive the preponderance of the meat-supply over the demand, that hundreds of thousands of animals are annually slaughtered and boiled down for the sake of their tallow alone. The number of boiling-down establishments in New South Wales, in 1864, was 57; in 1863 there were only 39. The number of sheep slaughtered therein during 1864 was 30,927, and the number of cattle about 60,000, the produce of the same being 75,241 cwt. of tallow. In the same year the yield of lard, from 4569 pigs, was 19,736 lbs. In 1867 the number of boiling-down establishments had decreased to 45, but most of these had extended their operations, while many others had been started in the adjoining colonies. A comparatively small proportion only of the tallow is exported from Australia, the larger quantity being required for the various colonial candle and soap factories. Several of these are on a large scale. At the Star Works, in Melbourne, 4000 lbs. of stearine candles can be produced weekly, although the establishment dates no further back than March 1867. In an adjoining factory, belonging to the Hobson's Bay Company, immense quantities of tallow-candles, also of soft soap for sheep-washing purposes, are annually produced. In some places the colonial soaps have driven the English soaps out of the market. In Sydney, the works of Messrs. Cowan & Israel turn out an average of fifteen tons of soap per week. There are also several other large soap and candle works in the same city; but during the last five or six years the manufacture of tallow has largely fallen off, so far as Sydney is concerned—a circumstance generally attributed to the increasing use of caustic soda, which, enabling soap to be made both easily and cheaply, even on a small scale, has caused almost every country town to have its own soap-works. In like manner, the manufacture of candles has become sensibly affected by the increasing abundance and cheapness of kerosene oil, also by the low figure at which sperm-candles are sold. The stearine candles made at Melbourne do not, however, appear to have suffered any diminution of demand. The best tallow only is exported to England, the inferior kinds being retained for colonial use. In 1868, Queensland exported tallow to the value of 122,544*l.*; in 1860

the value was only 25,628*l.*, so that the quantity exported by this colony has more than quadrupled in eight years. The quantities exported to England in 1867, by New South Wales, was 37,211 cwt.; by Victoria, 14,130 cwt.; and by South Australia, 294 cwt. In 1861, the value of the tallow exported from Victoria was 75,784*l.*; in 1868, it was 160,909*l.* The total quantity of Australian tallow imported by us during the first eight months of 1869 was 139,273 cwt.

Hides, Leather, and Bark.

At one time the export of raw hides was conducted on a large scale, but of late years it has been found more profitable to export them in the shape of leather, the various colonies being rich in the different requisites necessary for tanning. Had the earlier settlers taken out with them a greater knowledge of the arts and sciences, and known more of the principles on which great manufacturing industries are founded, many of the colonial trades, now in their infancy, would have become by this time fully established, and the senseless clamour of some of the colonists in favour of a protectionist policy would probably have never been heard. The Australian leather trade is an instance of this. There was no need to export raw hides, every facility for tanning existing in the colony.

In the Intercolonial Exhibition, held at Melbourne in 1866–7, a large number of specimens of native bark containing tannic acid were exhibited, including samples from New South Wales, South Australia, and Tasmania. Indeed, these barks are to be obtained from almost every part of the Australian continent. The number of colonial tanneries continues steadily on the increase, the rapid development of the native boot and shoe manufacture enhancing the demand for leather. In 1867, Victoria possessed 49 tanneries; South Australia, 30; New South Wales, 110—the other colonies having proportionate numbers. The leathers include every description of article, from the curried and dressed skins in which Sydney excels, to the common brown basils of Western Australia. In New South Wales the different branches of the leather-making industry are said to employ a larger number of hands than any other trade in the colony. The hides and skins used are those of the ox, calf, kangaroo, sheep, and (latterly) the horse. So plentiful and cheap is the latter animal, that there are several establishments devoted solely to the slaughter and boiling-down of horses. The horse-hides sell at from 5*s.* 6*d.* to 7*s.* each. The bark used for tanning purposes is chiefly that of the wattle, or mimosa, the demand for which is enormous. Large quantities are exported to Europe. In the county of Cumberland, New South Wales, close upon 2000 tons of this bark are annually consumed; and as no steps have been taken to cultivate the wattle, so as to replace the stock destroyed, it is feared that a time may arrive when the supply of this useful material may become extremely limited. Owing to the greater care in the stacking, Tasmanian bark commands a ready sale over other descriptions in some of the colonies. The great difficulty with which the tanners have to contend is the careless manner in which the hides and skins are taken from the animals. Sometimes the leather is thus

so disfigured by unnecessary cuts as to be unavailable for export purposes. The colonial boot and shoe-making industry, although exposed to a powerful competition from the general cheapness and excellence of the English exports, is making steady progress, the comparative deficiency of manual labour leading the manufacturers readily to avail themselves of every suitable mechanical appliance.

Many of the tanneries are in connection with large fellmongery and sheep-washing establishments, in which the bones, horns, and other parts of the animals are prepared for sale or export. Here, too, large quantities of glue are manufactured. In 1868, the quantity of hides and skins exported from Queensland was valued at 47,279*l*. New South Wales, in 1867, exported 80,813 hides and skins, besides 398 packages of leather; Victoria following with 39,932 hides, 759 packages of leather, and 59 of fancy leather—South Australia bringing up the rear with 2536 cwt. of leather. The total quantity of hides imported by us from Australia, during the eight months ending August 31, 1869, was 22,946 cwt. The colonial exports of bones, bone-dust, and glue are also very considerable.

Meat.

For several years past, the continually increasing deficiency in the European meat-supply has led to numerous attempts at bringing to England some of the surplus beef and mutton of which Australia possesses such an abundance. In some parts of the colonial pastoral districts the meat is literally thrown away. At one establishment near Ballarat, 180,000 sheep were boiled down for tallow within a period of eighteen months, and the quantity of mutton destroyed by this process is estimated at 1,800,000 lbs., which, if preserved, might have been sold in the European market for 41,000*l*. The number of cattle and sheep in Australia, according to the lowest computation, is 40,000,000, the annual available increase of the same being from 40 to 50 per cent. The estimated yearly deficiency in the annual food-supply, in London alone, amounts to something like 102,000,000 lbs. If we take the whole of the United Kingdom, the deficiency reaches the enormous quantity of 3,544,000,000 lbs., equal to about 70,880,000 sheep. The seeming anomaly of the existing enormous deficiency of animal food in this country not having previously been met by corresponding large importations of Australian meat, may be partly explained—as in the case of South America—by the existing want of knowledge of the subject here; also the absence, in Australia, of practical information and experience respecting the best methods of effectually preserving the meat in a comparatively fresh state. The attention of the Australian "shepherd kings" was directed to the question of meat-preservation so long back as 1846, when prizes were awarded at Sydney to an enterprising colonist, who subsequently migrated to Victoria, for "preserved fish, meat, and vegetables." After this, more than one attempt was made to open an export trade in preserved meat, but it was not until within the last few years that anything like an encouraging degree of success could be obtained. The number of meat-preserving establishments is now steadily on the increase. In Victoria there are more than a

dozen such places. In New South Wales, Queensland, and South Australia numerous meat-preserving factories are also to be found. At the Ramornie depôt of the Australian Meat Preserving Company, situate on the Clarence River, in the former colony, 1,164,970 lbs. of preserved meat (chiefly beef) were prepared and shipped, during 1867–8, to Europe. The Ramornie works are on a most extensive scale.

The Melbourne Meat Preserving Company possess a factory capable of disposing of 3000 sheep and 50 head of oxen per week. The tin canisters for holding the meat are also made here, the weekly number required being 12,000. The tinned meat is retailed in England at the price of 7*d.* per pound, and being without bone, is equal to ordinary butcher's meat at 5½*d.* per pound.

The great consumption of the tinned meats takes place, however, on board ships, the endeavour to introduce them as articles of ordinary use among the English people, generally, having failed. However cheap or wholesome the meats so preserved may be, there is no persuading those to whom cheap meat is daily becoming more and more of a necessity, to avail themselves of the supply thus opened to them. This fact has led to numerous experiments for preserving beef and mutton without having recourse to tins. Among the most notable of these was that made by Mr. Daniel Tallermann, late of Melbourne. In this the mutton is cured in the ordinary way, in the same manner as ham or bacon, and packed in casks of mutton or beef fat. Large quantities of this meat have been disposed of among the London artisans and labouring-classes. In Sydney, Mr. Mort has attempted to preserve meat by means of a system of artificial freezing, but hitherto without success. The use of bisulphate of lime for preserving purposes is being resorted to in a few instances, but this practice does not appear likely to become general. A system invented by Mr. Morgan, and which has found its way into South America, has been favourably spoken of. The process consists of a species of enforced filtration, by which the blood of the slaughtered animal is replaced by a corresponding quantity of brine. In fact, except in the shape of meat preserved in tins or packed in tallow, the question of meat-preservation does not appear to have advanced beyond the preliminary experimental stages. The manufacture of "essence of meat" is carried on very largely in New South Wales; Liebig's process being adopted in the Ramornie works, and Whitehead's in those at Broadwater.

Wheat.

The capabilities of Australia as a grain-producing country are practically inexhaustible. Millions of acres have been devoted to the growth of cereal crops, and every year beholds an extension of the number. In New South Wales, the number of acres planted with wheat, in 1867–8, was 149,142½; in Victoria, it amounted to 216,989; and in South Australia, to 457,628. The latter colony has become, to some extent, the granary of Australia, its exports of wheat and flour to the sister-colonies, during 1867, being as follows:—New South Wales, 78,726 quarters of wheat, and 14,318 tons of

flour; Victoria, 39,707 quarters of wheat, and 5,597 tons of flour; Queensland, 8829 tons of flour; and Western Australia, 406 tons of flour. Large quantities of wheat and flour have also been exported to New Zealand and the Cape of Good Hope, and of flour alone to the Mauritius, Singapore, India, Brazil, Batavia, and Hong-Kong. In the same year, South Australia commenced exporting wheat and flour in large quantities to the English market, no less than 149,745 quarters of wheat and 3947 tons of flour, intended for the mother-country, having been shipped from Adelaide during 1867. These figures are the more remarkable, when it is remembered that, in 1837, not a single acre in the colony had been sown with wheat, and that when the colony was formed, a fear existed lest it would not be able to produce grain sufficient for the support of its inhabitants. In 1840, the number of acres sown with wheat was 816; in 1867, the number considerably exceeded half a million. The business of exportation commenced in 1843, when the colonies, which in the early days of South Australia had supplied her with flour at 100*l.* per ton, were only too glad to purchase from her the same article at one-tenth of the price paid to them. The great impetus to wheat-cultivation in South Australia arose, however, from the discovery of the gold-fields in New South Wales and Victoria. In those colonies agriculture for a time became neglected, and but for the enterprise and energy of the South Australians, the colonial gold-fever might have been succeeded by a bread-famine. Yet with all her facilities for wheat-growing, South Australia might never have become a grain-producing country—at any rate, not upon a large scale—if she had been dependent for the realisation of her harvests upon the hand-labour of the colonists. But a scarcity of labour, during the harvest of 1843–4, led an ingenious colonist, Mr. Ridley, to invent a reaping-machine, the success of which led to an almost universal use of machinery for agricultural purposes throughout the colony. Although South Australian grain is exported largely to Victoria, the latter colony is itself no mean producer of wheat, the number of bushels grown in 1867 being no less than 3,411,663. Tasmania and Victoria are beginning to enjoy a reputation for barley, especially for malting purposes. The Tasmanian oats are also highly spoken of. Maize is exported in considerable quantities from New South Wales to the other colonies—Victoria, in 1867, purchasing no less than 600,000 bushels. Cereal crops are, however, raised with comparative ease throughout the whole of the colonies, and the establishment of various colonial agricultural societies is doing much to improve the existing methods of wheat-cultivation, and to economise the cost of production.

Wine Growing and Wine Making.

The capabilities of Australia as a wine-producing country were perceived even by the earliest settlers, but it was not until a comparatively recent period that the vine became systematically cultivated to any considerable extent. "There is scarcely a region in the globe," says a colonial writer, "which nature has so distinctively marked out for a wine-country as she has this southern Australian continent. In climate, in soil, in the rolling outline of the surface of

the ground, abounding as it does with gentle elevations, presenting the most propitious aspects for the ripening of the wine, Australia is not surpassed by any, and equalled by few, of the countries most celebrated for the production of superior wines." Camden, the seat of Sir William Macarthur, in New South Wales, is the oldest of the colonial vineyards. The collection of vines at this place was obtained from numerous cuttings procured by Mr. Busby from some of the best wine-growing countries in Europe, the whole expense of procuring the same being borne by Sir William Macarthur. From the Camden vines were obtained most of the plants in the New South Wales vineyards, also many of those in Victoria and South Australia; the latter colony, according to the Statistical Register prepared by Mr. Boothby, possessing in 1867 no less than 6209 acres devoted to the cultivation of the vine—the number of productive plants being 5,869,406, and of unproductive, 1,022,740. In 1863 the number of acres used for vineyard purposes in Victoria was about 2000; in 1867 it had increased to 4111 acres, representing 8,231,000 plants. In New South Wales, 2281 acres were under vine-cultivation; also 203 acres in Queensland, and 363 acres in Western Australia—the whole forming a total of not less than 13,319 acres devoted solely to wine-manufacturing purposes. At the present time the number of acres so used must have increased to more than 15,000. The average quantity of wine per acre produced in 1867 in the colony of Victoria was 70 gallons, and in South Australia fully 140 gallons. The official returns of New South Wales place the average produce per acre in that colony at 192¼ gallons in 1868; the number of gallons of wine obtained in that year from 1483 acres being 285,283. These diverse results are partly accounted for by the different character of the grapes grown, the difference in the modes of cultivation, and by the ages of the several vineyards, also by the difference of soil. The vintage of 1867 gave the following results:—

South Australia . .	863,454	gallons of wine.
Victoria . . .	284,118	„ „
New South Wales .	242,183	„ „

The number of gallons produced by South Australia in preceding years was even larger, but the prohibitory tariff imposed by the Victorian Government on colonial wines not manufactured in Victoria told materially on the South Australian trade. In 1862, South Australia exported 20,574 gallons, worth 6777*l*. In 1867, the quantity exported fell to 8924 gallons, valued at 1901*l*. The quantity of wine exported from Victoria in 1867 was 13,847 gallons, and from New South Wales, 2180 gallons. The extent and success of the vineyard industry in Australia—especially in South Australia and Victoria—is due in a great measure to the labours of German and other continental emigrants who had found their way to the antipodean regions. The character of the different colonial wines differs materially. Those of New South Wales and Victoria are chiefly of a light description, the South Australian wines being heavier and possessing more body, as are also the wines of Western Australia. Most of the colonial wines are named after the various grapes, but in New

South Wales they are often designated by the names of the places in which the vineyards are situated. Some of the vineyards are of considerable size: that of the Sunbury Company, in Victoria, covering a space of 206 acres, is said to be one of the largest in the world. The wines produced at Albury, in New South Wales, near the border of Victoria, enjoy a widely-spread reputation. Although native-manufactured wines are now extensively consumed in the colonies, they did not begin to have much of a marketable value until 1858-9, when an attempt was made by the Camden wine-growers to dispose of some colonial wine (in the wood) in Melbourne. Since then the popularity of native wine has so largely extended that in Melbourne alone there are upwards of sixty establishments devoted to its sale, one of which disposes of as much as 200 dozen in a single day. In Europe the product of the Australian vintage has yet to make its way, but the agents of the Auldana and other vineyards are actively endeavouring to procure a respectable place in the English market for the better class of colonial wines.

Sugar.

Sugar has become, among civilised nations, an article of consumption almost as necessary as bread and meat, the supply continually proving inadequate to the demand—a matter not to be wondered at, seeing that, in this country alone, the consumption of sugar is increasing daily; the average rate of sugar consumed being 40 lbs. per head, against 28 lbs. per head some twelve or fourteen years previously. The total quantity of raw sugar obtained by us from all sources, in 1868, was 10,729,611 cwt.; the quantity of refined sugar and molasses being 1,490,403 cwt. In 1854 the quantity of raw sugar imported was 8,028,758 cwt., and of refined sugar and molasses 1,290,915 cwt., showing that the art of sugar-production has not kept pace with the increasing demand. In many kinds of sugar the price is higher than it was in 1854; in others it has remained stationary; in only one or two is a decline manifest. The possibility of an interruption of the sugar-supply from Cuba has also tended to heighten prices. These circumstances have led to attempts at sugar-cultivation in New South Wales and Queensland, both of which countries are admirably adapted for growing either cane or beet. In the former colony, there are nearly 3,000 acres devoted to the cultivation of sugar, and the number is continually being extended. In Queensland, about 600 acres are under sugar-cultivation. The industry is yet in its infancy, but it seems to have firmly taken root, at any rate, in New South Wales. The profitable character of Australian sugar-growing is illustrated by the circumstance that a sugar-planter near Brisbane, in Queensland, has recently manufactured 8 tons 18 cwt. of dry sugar, and three hogsheads of molasses, from two acres of Bourbon cane, two years old. The estimated value of the sugar was from 32*l.* to 34*l.* 10*s.* per ton in Sydney. In one of the sugar-mills recently started in Queensland, two tons of sugar are produced daily. Efforts are now being made to cultivate beet for sugar in Victoria also. Under any circumstances, there can be no doubt that, before

many years have elapsed, native-grown sugar will have become a staple article of export from Australia.

Cotton.

When the outbreak of civil war in the United States led to that terrible dearth of cotton which occasioned the closing of the Lancashire mills, and deprived thousands of their customary means of employment, the attention of the English cotton manufacturers became directed to those countries affording a chance of yielding the supply which had ceased in America. Among these countries was Queensland, the soil and climate of which were declared to be admirably suited for cotton-growing purposes. The colonists, who had just separated themselves from New South Wales, readily availed themselves of the suggestion that they should strive to make cotton a regular article of cultivation; and a clause was inserted in the Queensland Land Act of 1860, to the effect that, during the first three years after the passing of the Act, land-orders to the extent of 10*l*., by way of premium, should be issued for every bale of 300 lbs. of good Sea Island cotton grown in the colony and exported to Great Britain; and that, during the two years following, a premium of 5*l*. should be given for the common descriptions of cotton. In 1867, there were about 8194 acres under cotton, being an increase of 5264 acres over the preceding year; but if it were not for the bonus of fourpence per pound paid by the Government, great losses would have been sustained by many of the planters. The variable nature of the climate, the difficulty of procuring cheap and suitable labour, and the keen competition kept up by American and East Indian producers, are very prejudicial to the interests of the cottongrowers of Queensland.

It was this deficiency of cheap labour which led to the large importations of Polynesian labourers, concerning which so much has recently been said. European labour is at present far too costly to be readily available for sugar and cotton-growing; and unless some cheap descriptions of labour, such as that of the Polynesians, is procurable, the newly-established industries must be continued under grave difficulties. Unfortunately, a number of abuses have gradually crept into the system of Polynesian immigration, rendering it, apparently, a kind of quasi-slavery; but the interference of the British Government, coupled with the remonstrances of the greater part of the colonists themselves, are likely to prevent a recurrence of the evils complained of. The largest Queensland cotton-plantation is that at Townsvale, on the River Logan, where, in 1868, 600 acres were under cultivation. On some of the small plantations two bales of cotton to the acre have been obtained. The general average is one-and-a-half bales per acre. The general impression is that cotton-growing in Queensland will not, at least for the present, become more extensively followed, many of the planters having expressed their intention of trying some other of the numerous products which offer themselves in such abundance to the discrimination of the Queensland agriculturist. The value of the cotton exported from the colony

in 1868 was 68,929*l.*, against 26,361*l.* in 1867, and 3056*l.* in 1863, when the exportation of Queensland-grown cotton commenced.

Silk.

Like the English cotton trade, the English silk manufacture has suffered much of late years from an insufficiency of raw material. The supply of raw silk from all countries has been decreasing steadily, in the face of a steadily increasing demand, the result being a marked rise in the price and value of silk articles. In fact, during the last eighteen years we have been going backwards instead of forwards. In 1850, we imported 6,480,000 lbs. of raw and thrown silk, of which 453,000 lbs. were re-exported, leaving 6,027,000 lbs. for home consumption. In 1868, we imported 7,362,751 lbs., re-exporting 2,988,743 lbs., and retaining for home use 4,376,008 lbs.—being 1,650,992 lbs. less than in 1850. On the other hand, our imports of manufactured silk have shown a vast increase, the re-exports of the same exhibiting a considerable falling-off, but this is explained by the natural tendency of manufactured articles to find their way to the dearest market. But for the increasing price of silk, its use would be far more universal. It is stated that, in 1855, China silks sold here at 8*s.* to 18*s.* 6*d.* per pound, according to quality; in 1868 the price was from 15*s.* to 31*s.* In Bengal silks the price has risen from 7*s.* 6*d.* to 18*s.*, in 1855, to from 13*s.* to 29*s.* in 1868. In Persian, Italian, and other silks the same increase has been observable. This deficiency of raw silk is largely attributable to the ravages of a disease or epidemic among the silkworms in the leading silk-producing countries, especially in France and Italy, in which lands the respective Governments, despairing of checking the spread of the disease by any known remedies, are obtaining large numbers of eggs from Japan and China to distribute among the rural populations. Although of late years the systematic cultivation of silk has been confined to a few countries only, it can be profitably grown in many other parts of the world, and Australia has been indicated as a country possessing in great abundance the various requisites for this species of industry. In Queensland, the experimental efforts to cultivate silk have resulted in a considerable extension of the number of acres planted with mulberry-trees—also the *Ailantus glandulosa*, on which the Ailant silkworm feeds. In Victoria and Tasmania the cultivation of silk is being largely encouraged, and some excellent samples have been obtained. In New South Wales the subject has been taken up with much vigour, especially by the Acclimatisation Society of that colony, which is sparing no pains to diffuse information respecting the proper methods of rearing silkworms. Mr. Brady, of Sydney, states that, for three summers and two winters, he had mulberry-worms in every stage, and was able to obtain silk every day in the year. More than this, he had been enabled to eliminate the disease which had proved so fatal in Asia and Europe. Judging from present appearances, it seems not unlikely that the cultivation of silk will shortly become a regular Australian industry.

Coffee, Tobacco, Flax, &c.

Coffee is being successfully grown in Queensland, and will probably become a staple product; while arrowroot has already become an article of export, not merely from Queensland, but from New South Wales also. Tobacco is largely grown in some of the colonies, 229 acres being devoted to its cultivation in Victoria alone, in 1867. In New South Wales the number of acres under tobacco cultivation in 1867 was 628. Paper is largely manufactured in one or two of the colonies, but the increasing demand for this article has led to attempts to procure it from other materials than rags and straw, the result being the confirmation of the assertion that Australia is rich in barks and grasses, from which paper of almost every description can be produced. Among these are the stringy-bark of Victoria, Tasmania, and South Australia, the bark of the red-gum tree of Victoria and South Australia, the woollybutt of New South Wales, and others. Flax is extensively grown, and flax-scutching mills have already been erected in more than one colony. Experiments in the cultivation of tea, fibres, olives, rice, and many other articles of everyday demand, have likewise been made; the results in every case being highly satisfactory, and affording a striking illustration of the apparently inexhaustible character of the native industrial resources of Australia.

Timber.

The timber trade of Australia bids fair to assume proportions of no ordinary magnitude, when the real utility of such descriptions of wood as the *Jarrah* of Western Australia shall have become better known and appreciated. The Jarrah is a species of mahogany, much used, both in Australia and India, for railway-sleepers, it being found to resist successfully the attacks of the white ant. It is also used largely for piles, dock-gates, bridges, &c., in consequence of its remarkable power of standing for an interminable length of time without giving any indications of decay. Admiral Sir James Stirling told a Committee of the House of Commons, that Western Australia contained sufficient Jarrah to build twenty British navies. Several of the colonial ships are built of this wood, the peculiar properties of which render copper-sheathing unnecessary, although the Australian waters are largely infested with sea-worm. When cut at the proper time—that is, when the sap is down—Jarrah proves the most durable of all known descriptions of timber; time, weather, water, and insects having no effect upon it. With the development of railway enterprise in India, there cannot fail to be a considerable increase in the exports of this kind of wood from Western Australia, despite the formidable rivalry to which it is exposed from the Indian teaks. For manufacturing purposes one of the most valuable descriptions of wood, so far as Australia is concerned, is the *Blackwood*. It is largely used for making railway-carriages, furniture, billiard-tables, and the like, its fine grain leading to its being often used as a substitute for mahogany. The *Huon Pine*, from Tasmania, bears a strong resemblance to maple, and is much employed in the manufacture of bedroom furniture. The timber is prized for shipbuilding

purposes, having been known to stand in a vessel's planking for twenty years without exhibiting symptoms of decay.

Among the woods employed by Australian coachmakers and millwrights are those of the *Ironbark*, *Box*, *Woollybutt*, and *Apple-tree*. The *Cedar* of New South Wales is largely used for furniture. It resembles Honduras mahogany, but is softer and closer in the grain. It grows to an immense size, a single tree being known to yield 80,000 feet of timber. Large quantities of this wood are exported, some finding its way even to Europe. The woods of the *Stringy Bark*, *White Gum*, *Messmate*, *Mountain Ash*, *Beech*, *She-Oak*, *Silver Wattle*, and *Black Wattle*, are also extensively employed for industrial purposes. At one time the timber trade of Tasmania began to assume rather large proportions. This was during the excitement consequent on the discovery of the great Australian goldfields, when everybody seemed eager to be off to the diggings. In 1853 the value of the timber exported from Tasmania was 443,161*l.*; in 1865 it had declined to 56,698*l.* It is, however, more than probable that a very large trade in veneers may be opened up with Europe, several of the Tasmanian and Victorian woods being admirably adapted for this purpose. The number of colonial trees available for industrial purposes is enormous. Some are used for purposes of distillation; spirits, tar, gum, and essential oils being obtainable in great quantities from various resinous descriptions of trees. Others are used for making charcoal. The wood-spirit is much used in the preparation of dyes for textile fabrics, also for the production of vinegar for culinary purposes. New South Wales and Queensland appear to be richest in trees most available for manufacturing purposes; Western Australia, Tasmania, and South Australia possessing the greater number of kinds suitable for use in shipbuilding and other industrial objects.

Gold and Gold-mining.

Vast as are the agricultural resources of Australia, those of a mineral character appear fully as extensive. As a gold-producing country, it has had no equal, either in ancient or modern times, yet it was only within the last twenty years that its rich auriferous character first became publicly known. So far back as 1788, says Mr. R. Brough Smyth, "it was announced that gold had been discovered in Australia; but the statement was not credited, and it rested probably on no better evidence than that on which the companions of Sir Francis Drake based their report of the auriferous and argentiferous character of the rocks of California, when they explored that country in 1579." From that time the matter remained in abeyance until 1841, when the Rev. W. B. Clarke, of Sydney, exhibited in that city several specimens of rich gold-bearing quartz, which had been collected by himself. At the same time, he expressed his confident opinion that gold would be found in abundance in New South Wales. Count Strzelecki, two years previously (in 1839), had also discovered gold in the colony, but, at the request of the Governor, the circumstance was not made public, "for fear of the consequences," in a country filled with many thousands of convicts. The specimens of gold-bearing quartz found by the Count were, however, brought to England, and shown to Sir Roderick Murchison, who, in 1844,

corroborated the opinions expressed by the Rev. W. B. Clarke respecting the existence of gold in Australia. About this period many of the colonists seem to have become aware of the vicinity of the precious metal, and to have actually collected and disposed of small quantities; but having no knowledge of gold-mining, they did not know how to follow up their researches. In 1849, a Mr. Phillips intimated his discovery of gold in various parts of Australia, but, as on previous occasions, no notice was taken of his assertions. Two years afterwards, this long-existing apathy suddenly disappeared. The discovery of gold in California resulted in directing the attention of the Australian colonists more largely to the auriferous character of the region inhabited by them. Mr. Hargreaves, who had just returned to Australia from California, was struck with the physical resemblance existing between New South Wales and the country he had just left. Travelling to Bathurst, he began washing the auriferous soil, Californian fashion, showing the glittering produce of his labour to the astonished colonists. The effects were electrical. Gold became the one absorbing topic, and gold-digging the great vocation of the colonists. The history of this remarkable period, together with some of its principal social and industrial characteristics, are to be found graphically described in the *Companion to the British Almanac* for 1853. Since that eventful time the history of Australian gold discovery and mining enterprise has lost none of its interest. Although the quantity exported annually from Australia is considerably less than in the earlier years of gold discovery, yet it is still conducted on an almost incredibly large scale, as shown by the official returns of the two leading colonies—New South Wales and Victoria—in which the precious metals are found.

The following table shows the quantity and value of the gold exports of New South Wales and Victoria from 1851 to 1868 :—

Year.	New South Wales.		Victoria.	
	Quantity exported.	Value.	Quantity exported.	Value.
	oz.	£	oz.	£
1851	144,120	468,336	145,137	438,777
1852	962,873	3,600,175	1,988,526	6,135,728
1853	548,052	1,781,171	2,497,723	8,644,529
1854	237,910	773,209	2,144,699	8,255,550
1855	64,384	209,250	2,751,535	10,904,150
1856	42,463	138,007	2,985,991	11,943,458
1857	253,564	983,850	2,762,460	10,987,591
1858	254,907	994,960	2,528,478	10,107,836
1859	435,995	1,698,078	2,280,950	9,122,037
1860	483,012	1,876,049	2,128,466	8,513,864
1861	488,293	1,890,908	1,978,864	7,915,532
1862	699,566	2,715,037	1,662,448	6,649,624
1863	605,722	2,361,949	1,627,066	6,508,264
1864	721,297	2,951,671	1,545,449	6,206,237
1865	682,521	2,647,668	1,556,737	6,226,948
1866	742,250	2,924,891	1,480,597	5,928,948
1867	461,775	2,170,165	1,433,687	5,738,993
1868	*333,747	*1,299,880	1,960,712	7,843,197
Total.	8,162,451	31,485,254	35,459,425	138,071,263

* For the first nine months only.

A decrease of gold exports from New South Wales, in 1855–6, was caused by the establishment of a mint at Sydney. The official statistics do not, however, give the quantities actually obtained at the goldfields, it being impossible to procure any accurate information on this point. The quantity of gold received at Sydney from the New South Wales mines during the six months ending June 30, 1869, was 105,333 oz. as compared with 107,792 oz. during the corresponding period in 1868, and 99,264 oz. during the same time in 1867. The value of the gold exported from Queensland in 1868 was 593,576*l.*; in 1867, it was 189,248*l.*; and in 1866, 85,560*l.*

Gold is believed to exist in Western Australia, but, although the Government of that colony have offered a reward of 5000*l.* for the discovery of a workable goldfield, the tempting prize has remained unclaimed. A similar reward has been offered by the Government of Tasmania, that island being supposed to contain auriferous schists similar to those in the Victorian and New South Wales goldfields.

The existing methods of procuring gold are very different to what they were in 1851. The individual miner, with his tin dish and other primitive appliances, has almost disappeared, and become replaced by mining companies possessing sufficient capital and machinery to enable them to carry on their operations on a large scale. In 1868 the number of registered mining companies in Victoria was 329, the number of shares held by them being 1,227,445, and the nominal amount of capital 3,719,198*l.* The profits made by some of the gold-mining companies seem almost fabulous. The called-up capital of nineteen of these associations amounted in 1868 to 280,355*l.* 12*s.* 4*d.*; the dividends on the same, after payment of all working expenses, being 2,362,577*l.* 1*s.* 4*d.* The Port Phillip Gold Mining Company's claims in Victoria are said to have produced more gold than any other mines in the world; the total quantity of alluvial and quartz gold obtained from them up to January 1, 1869, being no less than 279,105 ounces, valued at about 1,102,184*l.* There are, however, several undertakings which have been productive of nothing but loss to the shareholders. The number of miners employed on the goldfields in 1867 was 65,857; in 1868 it had decreased to 63,181. Of these 15,620 were Chinese. The average earnings per head in 1867 was 87*l.* 1*s.* 1*d.*; in 1868 it had risen to 104*l.* 18*s.* 8*d.* The estimated total yield of the machinery and mining-plant employed in the Victorian goldfields on the 31st of December, 1868, was 2,150,432*l.*, showing an increase of 71,237*l.* as compared with the previous year. The number of distinct quartz-reefs is 2,651, and the extent of auriferous land opened up by the miners 884 square miles. During 1868 twelve new goldfields were discovered, and the existence of others is continually being reported.

The social changes occasioned by the continual development of gold-mining industry in Victoria is characteristically illustrated by the contrast between the past and present condition of Ballarat. In 1851 the only habitation on the site of the present town was a shepherd's hut; at the same time the population of the district around Ballarat, within a radius of forty miles, did not exceed 500. Ballarat has now a population of 40,000 inhabitants, whose muni-

cipal affairs are under the control of three borough councils. The local revenue at the present time exceeds 50,000*l.* per annum, and is continually increasing. It possesses extensive systems of supplies of both gas and water, many of the mines by these means being furnished with gas as well as pure water for boiler purposes. The mines employ 387 steam-engines, having an aggregate of 9506 horse-power. Ballarat also possesses eight banking establishments, whose transactions are conducted in structures of great stability and considerable architectural beauty. It owns three daily papers, and returns four members to Parliament. There are government post and telegraph offices, court-house, three police-courts, treasury, land and survey office, besides three town-halls, twenty places of public worship, two theatres, four markets, mechanics' institute, free library, hospital, benevolent asylum, industrial schools for children, orphan asylum, botanical gardens, public park, and over 100 hotels. It numbers three rifle corps of volunteers, and boasts 200 miles in length of streets, adorned by a number of substantial villa residences, over ninety miles of streets being metalled and formed. The estimated value of land in the central part of the town is at present 50,000*l.* per acre; previous to 1851 the same land could have been procured for a few shillings. The quantity of gold produced by the district since 1851 is estimated at more than 40,000,000*l.*

Mr. R. Brough Smyth gives a long list of the more remarkable nuggets of gold discovered in Australia. These include the "Welcome Nugget," discovered at Ballarat, on the 15th of June, 1858, and weighing 2,217 oz. 16 dwts. This nugget brought the lucky finders 9325*l.* Another nugget, the "Blanche Barkly," was found quite by itself at Kingower, Victoria. It weighed 1473 oz. 13 dwts., and was valued at 6905*l.* 12*s.* 9*d.* Another, found by a native lad at Meroo Creek, New South Wales, weighed 1272 oz. The most recent of the great nuggets was that found near Donolly, in Victoria, on the 5th of February, 1869. It was discovered by two men, and weighed more than 2280 oz., the value being 9534*l.* Very heavy gold is characteristic of the Donolly district, and the finding of small nuggets is an event of almost daily occurrence. Another of the more recent of these remarkable masses of gold is that known as the "Curtis Nugget." It was found at Gympie, in Queensland, and is valued at over 4000*l.*

Diamonds and Precious Stones.

Although it is a generally recognised fact that, by the operation of some unknown natural law, diamonds and other precious stones are often, if not uniformly, found in the neighbourhood of gold, the search for gems has not hitherto been carried on in a regular or systematic manner in Australia. The recent discoveries of diamonds in considerable abundance at Mudgee in New South Wales, and at Beechworth in Victoria, bid fair, however, to effect a change in this respect. Several diamond-mining companies have been formed, and are already in full working operation. Within an extremely short period no less than 200 diamonds from Mudgee have passed through

the hands of a single Australian jeweller. These were obtained by the miners merely in "washing off" their gold; and large quantities of what are technically called "small-dust diamonds" have been thrown away as useless, although said to be worth from 200*l.* to 300*l.* per ounce for manufacturing purposes. The experiences of the earliest of the new diamond-mining companies seem to bear out the reports of the almost fabulous stores of precious stones contained in the auriferous portions of Australian soil. The labours of a single week, conducted on a most limited scale, produced 115 diamonds, ranging in value from 3*l.* to 5*l.* each, besides a profusion of garnets, topazes, and other valuable gems. A diamond, weighing five-and-a-half carats, and valued at 250*l.*, was discovered at Mudgee; and another, weighing upwards of seven ounces, has since been found between Bendimeer and Armidale, in New South Wales. This latter, however, is supposed by some to be a white topaz. Should it prove a true diamond, it will be the largest yet known. It is as large as a turkey's egg, and of a similar shape. Although these results appear to have taken the colonial public by surprise, the existence of diamonds in Australia had long been known, and fine specimens were repeatedly found, sometimes in no small number—as at Beechworth, in Victoria, where, during the year 1865, more than a dozen of these coveted gems were procured from a single claim. Besides these, many had been previously obtained in the same neighbourhood. The total number reported as being discovered in Victoria up to December 31, 1868, was sixty, but most of these were of comparatively small value. The Rev. W. B. Clarke, of Sydney, mentions several "finds" of diamonds in New South Wales, but none of the gems so discovered seem to have been of considerable size. Mr. George Foord, of Melbourne, is said to have been the first to establish the existence of diamonds in Victoria, having reported on one found by him in 1861 or 1862. Both the Rev. W. B. Clarke, of Sydney, and the Rev. J. J. Bleasdale, of Melbourne, appear to have predicted the discovery of diamonds and precious stones in Australia.

One reason why diamond-mining has not hitherto been followed as a regular industrial occupation in Australia, seems to have been the want of actual experience on the part of the gold-miners; also from the fact that the gems needed special search. Moreover, the miners were continually finding what they supposed to be real diamonds, but which, on examination, turned out to be varieties of rock-crystal, topaz, and white zircon. Hence the origin of the prevalent impression that "Australian diamonds" are not diamonds at all. The richer goldfields have frequently been found to teem with rubies, sapphires, and other precious stones, many being of the rarest and most valuable description. In the Uralea River, New England, a vast tract of grazing-country in New South Wales, the amount of sapphire and ruby is, according to Mr. Clarke, enormous. The diggings there are in granite detritus, over granite and under basalt. The green sapphire—which, according to Mr. Harry Emanuel, is the rarest of all gems, and scarcely ever met with—has been found both in Victoria and in New South Wales. The rarity of this description of precious stone may be inferred from the circumstance that Mr.

Emanuel, in the course of an extensive experience as a dealer in gems, only came across one specimen. At the Melbourne Intercolonial Exhibition of 1866–7 a fine collection of Tasmanian topazes were exhibited. Others, including some of the finest yet found at the antipodes, were procured from Victoria. The list of Australian gems and precious stones comprises almost every known variety, including the agate, amethyst, cornelian, chalcedony, garnet, onyx, opal, emerald, ruby, &c. These stones are believed to exist in unprecedented abundance; and when the search for them is prosecuted in a more steady and systematic manner, they will, in all probability, become a staple article of colonial export. Hitherto the thousands of small diamonds required for the glazing and other trades, also the myriads of rubies and sapphires used in the manufacture of watches, have been obtained principally from Brazil; but of late years the supply has proved so inadequate to the demand that the value of jewels has greatly increased, many costing more than double and even treble the amount charged in the earlier part of the century. The East Indies, and the Ural Mountains, in Russia, have contributed more or less to the supply of diamonds for manufacturing purposes, but not to the extent at one time anticipated. The profitable development of the traffic in Australian gems will, however, depend materially upon the manner in which the rich stores of precious stones known to exist in California, and in parts of British North America, are rendered available for use.

Silver.

Although Australia has yet to gain a reputation as a silver-producing country, vast supplies of this valuable metal are believed to exist in Victoria and the adjoining colonies. In the former the silver is principally obtained from St. Arnaud, where it is found with gold, copper, and lead. In 1869, about 2651 tons of silver ore were raised at the St. Arnaud works, the results of the same being 5604 ounces of pure metal. Silver-mines have been opened on the southern coast of New South Wales—also in South Australia.

Copper.

If South Australia cannot boast a participation in the auriferous wealth enjoyed by the neighbouring colonies, it can rejoice in the possession of the richest copper-mines in the world. Copper is found in New South Wales, Victoria, Queensland, Western Australia, and other parts of the Australian continent, but at present not to anything like the extent to which it is obtained in South Australia. Upwards of 616,405 cwt. of this useful metal, valued at 2,831,423*l.*, were exported from Adelaide in the five years ending December 30, 1867. The quantity of copper ore exported during the same period was 54,318 tons, valued at 645,156*l.*—the whole forming a total value of 3,476,579*l.* The original supply was obtained from the famous Burra Burra mine, situate about ninety miles to the north-east of Adelaide. It was discovered in 1845 by a shepherd named Pickitt. Mining operations commenced in the same year with ten men, and in a few days after the pickaxe had begun striking the ground, several

drays laden with copper ore found their way into Adelaide. "The history of the Burra Burra mine is," a writer in the colony remarks, "the history of the commercial progress of South Australia. Farms, land-sales, emigration, wharves, warehouses, projected railways, imports, rents, wages, have all rested on the yield of the Burra Burra." In 1860, a more extensive discovery of copper than even that of the Burra Burra was made upon land belonging to Captain Hughes, on York's Peninsula. The works here are known as the Wallaroo mines. About the same time a still richer supply of copper was found, about ten miles from the Wallaroo mines, also on land belonging to Captain Hughes. The number of copper-mines at work during 1867 was fifty-nine. The first discovery of copper was made in 1842, by Mr. C. Bagot and Mr. F. S. Dutton, at Kapunda, about fifty miles from Adelaide. Bismuth and lead have also been found, and are believed to be distributed over the colony. The total absence of fresh water in the vicinity of the Wallaroo mines—a circumstance which renders the district (a most extensive one) unfit for purposes of settlement—has given rise to a novel colonial industry, in the shape of fresh-water distilleries. The distilled water is retailed at about 2*s.* to 2*s.* 6*d.* per hogshead. Mr. Frederick Sinnett, alluding to this circumstance, observes that, "perhaps for the first time in the records of the world, a population of some thousands, with all their horses, and cattle, and domestic animals, drank *aqua distillata*." Alluding to some copper-works recently established in Victoria, Mr. McLeod observes:—"It is a curious fact, in connection with this trade, that no capitalists have ever started the project of utilising the raw material, copper, so abundant in Australia, instead of sending it to England for rolling into sheets, and then importing it back for manufacturing into the articles required. With all the copper abounding in, and exported from, these colonies, there is not a single establishment for rolling, although smelting is conducted on a large scale, especially in South Australia." During the first eight months of 1869 we imported from Australia 50,500 tons of copper, and 10,938 tons of copper ore.

Coal.

This useful mineral is found in great abundance in New South Wales, which annually exports large quantities of the same, not merely to the sister-colonies, but also to California, Japan, China, Java, Manilla, and other places. The actual limits of the great coal-field of New South Wales are at present very imperfectly known. It is found to extend into Queensland and to reappear in Tasmania, the latter colony possessing four coal-mines, from which 8341 tons of coal were raised in 1868. In 1867, the number of coal-mines in New South Wales was twenty-six, the quantity of coal raised during the same year being 770,012 tons. The official returns show that from 1852 to 1857 the produce of the mines was 750,021 tons; from 1858 to 1862 it was 1,712,061 tons; and from 1863 to 1867 it was 2,712,676 tons. In Victoria attempts to procure coal have repeatedly been made, but hitherto the quantities found have not proved remunerative. Good seams have been discovered, but they are not thick; besides, they are situate in localities difficult of access, and

where the cost of working is very great. The price of New South Wales coals in Victoria is about 30*s.* per ton, the quantity of the same imported into the latter colony in 1867 being 113,731 tons. During the same year South Australia imported 74,161 tons of coal from New South Wales. The chief supply of the mineral is obtained from Newcastle, about seventy-five miles from Sydney. The population of Newcastle exceeds 10,000. Previous to 1845 there was only one coalpit and one coal-shoot in the place, and these were deemed sufficient to supply Sydney and the few coasting-steamers running to Port Jackson. It was not until 1849 that the item of coals was considered of sufficient importance to have a place assigned to it in the annual statistics of the colony. The coals are drawn by locomotive engines along well-constructed tramways from the pit-mouth to the shipping-places, where steam-cranes and other facilities are in action for the ready loading of vessels of large tonnage. It is believed that should the numbers of the mining population become proportionately increased, the coal districts of New South Wales could furnish an ample supply of gas and steam-fuel to the whole of the countries throughout the Indian and Pacific Oceans. Indeed the possession of coal is likely to prove a greater source of wealth to New South Wales than even the gold in which she is so rich. The quality of the coal from one of the pits was tested at the Royal Arsenal, Woolwich, in 1858, and again in 1859, the results being highly satisfactory, showing that for steam purposes it is only 7 per cent. inferior to Welsh coal; while, with regard to the manufacture of gas, it produces upwards of 9000 cubic feet per ton, with an illuminating power of 24 per cent. more than the English variety known as Whitworth.

Kerosene.

Bituminous shales occur in those parts of the Australian colonies in which coal-bearing strata are found. In some places the richness of the shales has led to the establishment of extensive works for the manufacture of kerosene. The story of the discovery of kerosene in New South Wales is a very simple one. The first specimen of the coal was found as far back as 1855, when a sample of it was sent to the Paris Exhibition of the following year. By some accident it attracted no notice there, and was passed over, being evidently taken for a species of lignite. Though it excited no attention in Paris, it had not, however, escaped the observation of the Rev. W. B. Clarke, who, in his paper on the Coalfields of New South Wales, furnished to the New South Wales Commission for the Universal Exhibition held in London in May, 1862, alluding to the similarity between the combustible schists of Tasmania and New South Wales, mentioned that the latter might "perhaps be valuable as a source for the manufacture of mineral oil." Early in 1865 a sample of the coal fell into the hands of a gentleman experienced in such matters, who at once recognised it as being similar, in all visible respects, to the cannel-coal of North Britain. This led to further investigation, and ultimately to the discovery of the rich supplies of bituminous shale which are now being largely worked at Petrolea Vale, near Hartley. The oil produced is of the finest possible quality, giving a far stronger light

than the best European or American oils, and burning, like Young's paraffin oil, one-third longer. The shale improves in quality the further it goes into the hill. Besides kerosene, several kinds of heavier oils are extracted; these are in demand for lubricating machinery. The mines are situated at a distance of 2700 feet above the level of the sea, and the works are said to be capable of producing 5000 gallons of oil per week. Attempts have been made in Victoria to manufacture the oil, but the idea has been abandoned for the present, in consequence of the large yields from the American mineral springs lessening the price of oil to an extent which renders the working of the Victorian mines unprofitable.

Iron, Tin, and other Minerals.

Iron is known to exist in many parts of Australia, but very little appears to be regularly mined, except at Nattai, in New South Wales, where the ore is of extraordinary richness. The ore is a red hematite, containing about 70 per cent. of metal, and is found on the surface, and also extending underground to a depth of thirty feet. The Fitzroy iron-mines at Nattai have been now some fifteen or more years in existence, during which time large quantities of valuable iron ore have been obtained; nevertheless, the iron industry of Australia cannot yet be said to have fairly commenced. Although coal is also found in abundance in the neighbourhood, together with large quantities of good workable clay, suitable for manufacturing into firebricks, the cost of transit of the iron produce from the mines more than counteracts these advantages. When the tide of colonial population becomes more largely increased, and a corresponding development of the Australian railway system practicable, iron-mining will become a leading industry, not merely in New South Wales, but in the other colonies in which this useful mineral is found. In South Australia it exists in vast quantities. Some few years ago the South Australian Government offered a reward of 500*l.* to the first person who should melt a specified number of tons, but the reward has never been claimed. At present the demand for the raw material is too limited, while the rate of wages is too high, to enable colonial iron-smelters to compete with those of Europe and America. Tin has been found in Victoria, but the tin-bearing rocks have yet to be discovered. It generally occurs in the form of oxide of tin, in which shape it has been obtained in large quantities from the neighbourhood of Beechworth. The quantity of tin ore exported from Victoria up to December 31, 1868, was 2871 tons 1 cwt., and the quantity of smelted tin, 25,632 lbs. The metal is found in some of the other colonies, but has not yet become a special article of search. Antimony is found in South Australia, Victoria, Tasmania, and New South Wales, also in Queensland. Lead is mined largely in South Australia, the exports of the smelted metal from that colony during the five years ending December 31, 1867, being 5158 cwt., and of lead ore 1963 tons. In New South Wales the indications of the existence of lead are numerous. Similar traces are plentiful in Queensland. Small quantities of native lead are found also in Victoria. In fact, it may be said that there is scarcely a known mineral which is not to be found in some part or other of the Australian

continent, the metalliferous wealth of which bids fair to surpass anything of the kind yet recorded. Immense tracts of land, many miles in extent, and believed to be extremely rich in mineral treasures, have yet to be explored; while the proper examination and working of the districts into which the stream of population is gradually finding its way must form the task of future generations. Large quantities of porcelain and other clays, beautifully variegated marbles, slates, building stone, and other useful articles, are also obtained from various parts of the colonies.

Minor Industries.

Whaling is carried on to some extent by the Tasmanians, and in Western Australia pearl-fishing has been successfully prosecuted at Nicol Bay. A single pearl sent to England from this place realised 260*l*. As a general rule, however, the pearls taken hitherto have been of small size, and therefore of limited value. Several tons of pearl-shell are now annually exported from Perth. On the coast of Queensland coral is found in abundance, and it is probable that before long it may become a regular article of colonial export, the pink varieties of coral having risen enormously in value of late years. Ship and boat-building are followed pretty extensively in the older colonies, and there are few trades or manufactures in the mother-country which do not possess a representative in the Australian cities and towns. The mere enumeration of the various colonial mills, works, and manufacturing establishments which have sprung into active being during the last few years would suffice to fill a large volume. The glance taken by us of the present state of industrial progress in Australia, is necessarily of a most cursory character; nevertheless, it is amply sufficient to show how vast and inexhaustible is the field afforded by the colonies, either singly or collectively, for the remunerative employment of the many thousands of artisans who in this country find it so difficult to procure the means of livelihood. It is not a wise thing to encourage the departure of industrial skill and energy from our shores, but when the workman has to make his choice between emigration and the workhouse, we cannot blame him for preferring the former. Far better that he should be a self-supporting labourer in Australia, than a burdensome pauper at home. Hence the desirability of rendering our labouring population more familiar with the industrial advantages possessed by New South Wales, Victoria, and the sister-colonies; so that they may be led to endeavour, by means of emigration clubs, and other practical applications of the co-operative principle, to find their way to regions where they may gain the sweets of independence for themselves, and assist in relieving the ceaseless and increasing pressure on the labour-market at home.

John Plummer.

Note.—Among the works consulted by the writer may be mentioned the Statistical Registers of New South Wales, Victoria, South Australia, &c.; "The Gold Fields and Mineral Districts of Victoria," by R. B. Smyth; "The Official Record of the Melbourne Intercolonial Exhibition," 1866-7; Bailliere's "New South Wales Gazetteer;" "South Australia, its Progress and Prospects," by A. Foster; "The Colony of Victoria," by W. Westgarth; "Another England," by E. C. Booth; "An Account of South Australia," by F. Sinnett; "Prince Alfred in Victoria," by J. G. Knight; together with numerous treatises by Dr. Lang, and other colonial writers. Considerable use has been made also of information procured from the columns of the *Sydney Morning Herald*, *Melbourne Argus*, and other leading colonial journals; likewise of various pamphlets, published from time to time in the colonies.

THE NATIONAL GALLERY.

ENGLAND was behind most of the other countries of Europe in providing art-galleries for the general pleasure, information, and culture. Even when she had founded her National Gallery of pictures, she seemed to take but a languid and fitful interest in its condition; for some years proceeded slowly in its extension, and was, till the last summer, content to see it housed in the half of a not very large and not very commodious edifice. The removal of the Royal Academy, which occupied the other half of the so-called National Gallery, has allowed the entire range of rooms to be appropriated to the national pictures: and perhaps the better opportunity thus afforded of seeing them—it may be also the renewed proposal of the Government to erect a larger gallery for their more adequate exhibition—has directed attention anew to the pictures themselves; certainly, they have been much discussed lately in Parliament, in the public journals, and in private society. It seems, therefore, a not unbefitting time to take stock, so to speak, of the Gallery—to inquire generally into the extent and character of the collection, and how far, comparing it with the continental galleries, it is entitled to the rank of a National Gallery. We have already sketched the early history of the Gallery:* whilst therefore we must, to a certain extent, travel over the ground again, we may take a broader general survey, and, in noticing particular paintings, confine our attention in the main to those of recent acquisition.

A singular opportunity for laying the foundation of a National Gallery was lost when Mr. Buchanan, in 1803, offered to the Government a collection of pictures, few in number but of rare interest and value, as the nucleus of a national collection. The disturbed state of the Continent had rendered the owners of several Italian palaces anxious to convert their pictures into money, that they might be the better prepared to meet threatening contingencies. Mr. Buchanan having, as his agent in Italy, a shrewd dealer and a good judge of the mercantile value of works of art, had seized the favourable moment to make some successful purchases, and to open negotiations for more. The choicest of his pictures he offered to the nation. Among them were four by Rubens—"Peace and War," "The Procession of Julius Cæsar," and the famous "Château de Stein," and still more famous "Rainbow" landscapes; a splendid landscape by Claude, from the Colonna Palace; Parmigiano's "Marriage of St. Catherine;" Poussin's "Plague of Ashdod;" a couple of pictures ascribed to Raffaelle, from Florence; and Vandyck's well-known triple portrait of Charles I. (now at Windsor), in which the monarch's melancholy face is shown in profile as well as full. For these Mr. Buchanan asked 20,000*l.*, at the same time intimating, that, if desired, he was willing to place the best of the other pictures for which he was negotiating at the disposal of the Government. The offer was, however, promptly declined, Mr. Pitt, then Prime Minister, being of opinion that "the Government was not in a state at that time to lay out money on objects of that description."

* In the "Companion" for 1859; more briefly in that for 1866.

Several of these pictures have since become the property of the nation, and others are in well-known galleries; so that we have the means at hand of estimating the value of the collection as a whole, and the effect it would probably have had in stimulating other purchases and gifts. Rubens's great picture, "Peace and War," as it was called, was singularly fitted to be the cornerstone of our National Gallery. It was painted in England, whilst Rubens was here as envoy, in 1629–30, and presented by him to the King, Charles I. On the death of Charles, and the dispersion of the royal pictures, it was obtained by the Doria family, and became a leading ornament of their palace at Genoa, where it was known as "The Family of Rubens." Mr. Buchanan acquired it for about 1100*l.*, and on its being declined by the Pitt ministry, it was purchased for 3000*l.* by the Earl of Gower (afterwards Marquis of Stafford and first Duke of Sutherland); and he, appreciating the kind of national interest attaching to it, as well as its artistic value, presented it to the country in 1828. The two landscapes by Rubens were sold for 1500*l.* apiece. The "Château de Stein" was bought by Lady Beaumont to present to her husband, who gave it, with his other pictures, to the nation in 1826. The subsequent history of the "Rainbow" landscape illustrates well the rise in the value of really fine pictures since 1803, and the difficulty there may now be in procuring them for the national collection. It was sold, as we have said, for 1500*l.* Twenty years later, at the sale by auction of Mr. Watson Taylor's pictures, it fetched 2730*l.* Another twenty years passed, and it again appeared at Christie's (1856), when it was knocked down for 4550*l.* "The Procession of Julius Cæsar" was purchased by Mr. Champernowne for 800*l.*; it afterwards became the property of the poet Rogers, and on his death was bought for the gallery for 1102*l.* Poussin's "Plague of Ashdod," which sold for 800*l.*, was in 1838 presented to the National Gallery by the Duke of Northumberland. The Raffaelles, not finding purchasers at the price Mr. Buchanan set upon them, were sent back to Florence; and Parmigiano's great picture was also returned to Italy, "as it had been sought after by Lucien Bonaparte."* A little later, but whilst Pitt was minister, the collection formed by Mr. Noel Desenfans was offered to the Government, on condition that a gallery should be built for its reception and free exhibition. The offer was declined, and the collection was bequeathed, on the same terms, to the trustees of Alleyn's College at Dulwich, who commissioned Sir John Soane to erect a gallery. This was opened to the public in 1812, Dulwich Gallery thus preceding the National Gallery by a dozen years.

These opportunities missed, many years elapsed before another presented itself. But in 1823, Sir George Beaumont—a leader in the art-world of that day—informed the Government (Lord Liverpool being premier) that he was willing to give the more valuable portion of his collection of paintings whenever it should be decided to found a National Gallery. The fine collection of Mr. Angerstein was about the same time offered to the country, and it was felt that in the two collections the foundation would be laid of a really good gallery. Mr. Angerstein's pictures were, accordingly, secured for a sum of

* Buchanan's "Memoirs of Painting in England," vol. ii. p. 111.

57,000*l.*, and exhibited to the public on the 10th of May, 1824. Sir George Beaumont's pictures were added in 1825. The Angerstein Collection comprised thirty-eight paintings—twenty-nine by the old masters, nine by British artists. Among them were "The Raising of Lazarus," the masterpiece of Sebastian del Piombo, and painted, with the assistance of Michael Angelo, in competition with Raffaelle's "Transfiguration"; Raffaelle's Portrait of Pope Julius II.; Rubens's "Rape of the Sabines," and "Holy Family;" Rembrandt's exquisite picture of "The Woman taken in Adultery;" five admirable landscapes by Claude Lorraine; and works by Titian, Correggio, the Carracci, Vandyck, Nicolas and Gaspar Poussin, Cuyp, and others; whilst the British works included Hogarth's incomparable "Marriage à la Mode," Reynolds's grand historical Portrait of Lord Heathfield, the defender of Gibraltar, and Wilkie's "Village Festival." The Beaumont donation numbered sixteen choice works, mostly of cabinet size, but including such gems as the four landscapes by Claude, Rubens's "Château" landscape, Sebastian Bourdon's "Return of the Ark," Wilkie's "Blind Fiddler," and others by Rembrandt, Both, Canaletto, Reynolds, and Wilson.

The management of the Gallery was nominally vested in a Board of Trustees, but the actual direction was in the Keeper, Mr. William Seguier, a picture-dealer, and the son of a picture-dealer, who also held the offices of Conservator of the Royal Pictures and Superintendent of the British Institution. In his hands the management was not likely to be very active. It seemed to be recognised, from the first, that the Gallery was to be a gallery of "the Great Masters." The English school was entirely ignored. In purchasing additional pictures, the only works sought for, or accepted, were those of the painters whose names were familiar in the sale-room and in the larger private collections. For twenty years, the Gallery was conducted on what may be described as purely amateur or *dilettante* principles. During those twenty years, just nineteen pictures were purchased, at a total outlay of 48,000*l.* Among them were several admirable works, though not one out of the regular gallery category. Such were the "Bacchus and Ariadne" of Titian, bought with Poussin's "Bacchanalian Dance;" and another in 1826, for 9,000*l.*; the Marquis of Londonderry's pair of Correggios, obtained in 1834, at the handsome price of 11,500*l.*; Murillo's "Holy Family" and Rubens's "Brazen Serpent," purchased two or three years later for 7000 guineas; and—a far better bargain—Raffaelle's exquisite "St. Catharine," obtained in 1839, with Mazzolini's and Garofalo's "Holy Families," for a like sum. Towards the end of Mr. Seguier's career, when mediævalism was becoming fashionable in art as well as in theology, and the early painters began to be inquired after, Francia's "Virgin Enthroned" and "Pietà" (the latter one of the purest and most perfect pictures produced before Raffaelle's maturity), Pietro Perugino's "Holy Family," and Jan Van Eyck's marvellous little picture, now known to represent "Jean Arnolfini and his Wife," were added to the Gallery.

Mr. (afterwards Sir Charles) Eastlake succeeded Mr. Seguier, as Keeper, in 1843; but he held this post only four years, and during

that time effected no marked change. Ten or eleven pictures were bought, but all were of the Raffaelle or later epochs. One or two were mistakes—the so-called "Holbein," for example, and the "Boar Hunt," by Velasquez, which had been so extensively repainted by Lance, the fruit-painter, as to be rendered nearly valueless for a National Gallery; the pictures in which ought to be, like the archives in a record office, documents which the student can refer to with tolerable security that they are neither forged nor have been tampered with. Most of the purchases were, however, excellent. Especially so was that perfect gem, named Raffaelle's "Vision of a Knight," but which evidently is the painter's rendering of the ancient myth of "The Two Ways." A thousand guineas were never better spent on a picture than on this. Rubens's splendid "Judgment of Paris" was obtained for 4000 guineas, exactly double the sum paid for it by Lord Kinnaird, at the sale of the Orleans Gallery, in 1799.

We may pass over the next few years, and come to the appointment, in 1855, of Sir Charles Eastlake to the office of Director of the National Gallery—with that appointment a new system having been initiated. Hitherto the pictures had been purchased nominally by the Trustees, when offered privately or at public sales, the Treasury being, in every instance, applied to for the requisite funds, and the purchase made subject to its sanction. For a short time, indeed, an agent had been appointed to travel on the Continent, and report on any suitable pictures he might find for sale; but exception was taken, in the House of Commons, alike to the person and to his selections, and his engagement was speedily terminated. To the new Director was assigned a much higher salary than the previous Keepers had received; but on him alone was now thrown the responsibility of the selection and purchase of pictures, the Trustees having only a circumscribed power of dissent. At the same time, instead of separate applications having to be made to the Treasury, it was decided to appropriate an annual sum of 10,000*l.* to the purchase of pictures; the surplus, if any, being returned, at the end of each financial year, to the Treasury, there to accumulate and be available for larger purchases in any subsequent year. It was also arranged that the Director might visit the Continent, annually or otherwise, to acquaint himself with any pictures that might be for sale abroad. This system has been continued to the present day, and is still in operation, and to it must be attributed, in a great measure, the actual condition of the collection.

Sir Charles Eastlake was Director of the Gallery exactly ten years, in which time he increased the number of purchased pictures above 160 per cent. The pictures purchased from the foundation of the Gallery in 1824 to 1855, that is during thirty-two years, amounted, as we learn from the Official Catalogue, "to only ninety-six in number; while those purchased during Sir Charles Eastlake's directorship (1855–65) reached the number of 155, at an average cost of 662*l.* 2*s.* 10*d.*" Still more marked than the increase in the number was the change in the character of the purchases. Eastlake had chiefly given his attention to Italian and particularly Venetian art. As a painter, his technical processes and system of colour were founded on, if they were not imitations of, the manner of Giorgione,

and, in a somewhat less degree, of Titian. But with advancing years, he applied himself less and less to the practice, and increasingly to the history and literature, of painting; and as his leaning was decidedly towards religious art, he was prepared, in a measure, to fall in with the growing tendency for ecclesiastical archaism, or what is more euphuistically termed Christian Art. His historic studies, and doubtless the influence of German artistic authorities, at the same time led him to regard these early works even more from the historic than from the religious point of view, and hence he became a willing convert to the doctrine that great national collections should be made as far as possible to afford a chronological view of the growth and development of the several schools of painting. And it was to the carrying-out of this idea in the National Gallery, as far as the means were afforded him, that he devoted the remaining years of his life. With the exception of the Krüger Collection, purchased, at his suggestion, the year before his appointment to the directorship, the National Gallery possessed no works of early Christian Art, unless, indeed, one or two painted by Francia and Perugino—the intermediate links between the antique and modern styles—be placed under that category.

During the ten years of Eastlake's rule, pictures of a kind that would have affrighted the first Keeper, and horrified the original Trustees, were placed on the walls of the Gallery with a lavish hand. Murmurs were uttered in high places, but the Director explained that those "unsightly specimens" were "selected solely for their historical importance," and he was allowed to have his way. Yet, while diligently seeking out these historically important works, he was very far from neglecting the productions that were important in an artistic sense, with which all his early predilections were in unison. Indeed, some of the grandest pictures which the country possesses were purchased by him, and purchased at a cost which he well knew would draw down adverse criticism from very opposite quarters. The result was, that whilst there were added to the Gallery many noble pictures by the really great masters of Italy and the Netherlands, the commencement was made of what may eventually become, if his practice be steadily but cautiously followed, a most instructive series of works, illustrating, with some approach to completeness, the rise and development of the principal schools of painting.

Many of these "early and unsightly specimens" were bought at a comparatively low price, and not unfrequently they were obtained several together, or in collections, as in the Lombardi-Baldi, Beaucousin, and other collections; whilst the really great works were usually bought singly. But for some of the choicest of the early and intermediate works large sums were given, and given judiciously. The wonderful picture of "The Saviour with the Banner of the Resurrection," surrounded by apostles, prophets, and the holy band of martyrs, confessors, and beatified persons—a host "worthy indeed to be dwellers in paradise," as Vasari wrote in an unwonted fit of enthusiasm—one of the purest and loveliest of Fra Angelica's pious inventions, cost the country 4200*l.*; but then it is a picture which might be not unfitly placed beside the noblest in any gallery. Palla-

juolo's "Martyrdom of St. Sebastian" cost 3155*l.*; Perugino's "Virgin and Child, with the Archangels Michael and Raphael," 3571*l.*; Crivelli's "Madonna and Child Enthroned, with St. Jerome and St. Sebastian" (the former saint in cardinal's robe and hat, the latter as a spruce young cavalier holding the arrow—symbol of his martyrdom—daintily between his thumb and forefinger), nearly 2200*l.*; and these sums are not at all beyond their merits.

As regards the really first-class pictures, by painters who are universally known as the Great Masters, purchased by Sir Charles Eastlake, a few words will suffice, as most of them were noticed on a previous occasion. First in size and cost, and foremost in quality, is the gorgeous "Family of Darius," by Paul Veronese, bought in 1857 for 13,650*l.*, from Count Pisani of Venice, for one of whose ancestors it was painted. Though not equal in size or splendour to the famous "Marriage at Cana" in the Louvre (that being 21 feet 9 inches by 32 feet 4 inches, whilst this is only 7 feet 8 inches by 15 feet 6 inches), it ranks among the great Venetian's chief works, is in admirable preservation, and belongs to a class of pictures which the Gallery greatly needed. A not unworthy companion from the same pencil, "The Adoration of the Magi" (11 feet 7 inches by 10 feet 7 inches), was bought in 1855 for about 2000*l.* Alongside these masterworks of the Venetian school when at its highest, may be placed the "Madonna and Child" of Carpaccio, the immediate precursor of Titian, bought for 3400*l.*—one of Eastlake's latest purchases. Next to "The Family of Darius" the most famous work obtained by Eastlake was the "Madonna and Child," formerly known as the Aldobrandini, and later as the Garvagh Raffaelle, from the names of its successive owners. This little gem—it is only 15 inches by 13—was bought by Mr. Day, about 1798, for 900 guineas from the Aldobrandini Palace (along with Leonardo da Vinci's "Christ Disputing with the Doctors," which has likewise found its final resting-place in the National Gallery), and sold by him in 1800, for 1500 guineas, to Lord Garvagh. From the Dowager Lady Garvagh it was obtained for the National Gallery, in 1865, at a cost of 9000*l.* Works by Lippi, Pesellino, Rembrandt, Hobbema, and others, might be cited as illustrating the range and generally high character of Sir Charles Eastlake's purchases; but it may suffice to quote the summary of these purchases made by Mr. Wornum, in his brief biography of Eastlake in the British Catalogue:—"These 155 pictures represent eight schools of painting, and 111 masters, extending over a period of seven centuries. The various Italian schools are represented by eighty-two masters; the Flemish school by eleven; the Dutch, German, and British schools each by five masters; and the French, Spanish, and Byzantine by one each." The distribution appears somewhat unequal, and hardly according to the relative importance of the several schools; but it must always be remembered, in considering the purchase of authentic pictures by the old masters, that they can only be bought when offered for sale: they cannot be procured to order.

On the death of Sir Charles Eastlake, in December 1865, Mr. W. Boxall, R.A., was appointed to succeed him. The new Director has

hitherto shown no desire to depart from the ways of his predecessor. His purchases have been kept well within the annual 10,000*l.* allowed by the Treasury, and the pictures bought have generally been of high quality. From his appointment, in February 1866, to April 1869, he has purchased twenty-nine pictures (all but two by the Old Masters), at a cost of 23,124*l.*, being an average of 797*l.* each. In all, 352 pictures have been purchased for the Gallery, at a total cost of a little more than a quarter of a million (254,888*l.*), spread over forty-five years.

Two of Mr. Boxall's purchases—"Christ Blessing Little Children," ascribed to Rembrandt, and "The Entombment," believed to be by Michael Angelo—have been productive of much discussion and criticism. The Rembrandt was purchased in 1866 of M. Seurmondt, of Aix-la-Chapelle, for 7000*l.*—a large sum; but the picture is of considerable size (6 feet 10 inches by 5 feet), and works by Rembrandt, of unquestionable excellence and in good condition, now fetch enormous prices when submitted to public competition, as was shown at the late De Morny sale, when "A Head by Rembrandt, in his smooth manner," realised 6500*l.* The picture was placed in the Gallery in October, 1866, and was received with very general favour; but after a time—first in the House of Commons, and since in the House of Lords—it was denounced in almost unmeasured terms as "a spurious work," a "tenth-rate picture," and the like, or worse. Now, the picture is not one that came before the student of art for the first time when it was exhibited at the National Gallery. With the exception of those masterworks, which stand by general agreement as the representative pictures of the heads of the several schools of painting, few pictures were better known or more commonly referred to. It had been in the possession of the Schönborn family for a century and a half, was one of the leading features of the collection in the Schönborn Palace at Vienna, and was there, as far as is known, always attributed to Rembrandt—certainly as early as 1746, as it is so described in the Catalogue drawn up in that year. Continental critics and writers on art, when referring to it, have, we believe, always done so in terms which imply no suspicion of its authenticity, and generally expressing a high opinion of its merits—some, indeed, ranking it among the four greatest of Rembrandt's works. Several distinguished painters have in like manner expressed a high opinion of its technical merits. We may then, without incurring the charge of presumption or discourtesy, at once say that the language applied to the picture in the House of Lords is not justified by what is known of the history of the picture—on which side, of course, every one acquainted with the ordinary laws of historical investigation is competent to speak—and it is certainly not justified by an examination of its technical qualities, on which perhaps members of the Upper House are not likely to be the best qualified to speak with authority.

At the same time, whilst recognising the unquestionable originality of the picture, it must be confessed that, except by the regular frequenters of picture-galleries, it would hardly be regarded as an impressive work, or in any sense an adequate representation of

the scene; though having been painted honestly, according to the conception of the right method of painting religious subjects prevalent in Rembrandt's time and country, we can understand that it would impress strongly an uncritical and uneducated Dutch congregation, who saw it suspended over an altar or in a chapel. The treatment of the subject is homely in the extreme. The mothers are ordinary Dutch wives in their everyday Dutch dresses; the children are Dutch children. The most prominent of them, the little girl upon whose head the Saviour has placed His hand, is just such a chubby damsel as you may see any morning at Amsterdam or Rotterdam—satchel and slate slung by her side, an apple in one hand, a finger of the other hand in her mouth, stopped for a moment on her unwilling way to school. All the crowd are of the same commonplace character. Only in the head of the Saviour has any attempt been made at elevation of expression. From the æsthetic or subjective treatment of the theme not much is to be learnt. Nor is it easy to feel quite satisfied with its technical methods. As a whole, it is wanting in strength, homogeneity, grasp. Neither in arrangement of lines, in chiaroscuro, or handling, is there what you would look for in Rembrandt. You have neither his concentration of light nor masses of gloom, nor that subtle interpenetration of one by the other which conceals from you the conventionalism that underlies the whole arrangement; but instead, a scattered, disrupted, or (as painters term it) *spotty* diffusion of light upon the separate heads of the crowd on the left, irritating the eye of the spectator, and drawing it away from the true centre of interest. But these heads appear to have been at some time considerably repainted, which may account not only for the spottiness, but for their curiously modern cast of countenance—as, for example, in the young man on the extreme left. The painting itself, the mode of laying on the colours—impasto, handling, touch—is certainly very unlike that in any of the dozen pictures by Rembrandt which surround it, and unlike any we remember of his. But his method of painting was very different at different times, and, if it were not for a somewhat oppressive want of vigour—the absence of the distinctive mental stamp—mere difference would be of little account. Some have been disposed to attribute this picture to Rembrandt's scholar, G. Van der Eeckhout—chiefly, it may be presumed, from Eeckhout's works being distinguished by thinness and spottiness in the technical part, and something of feebleness in the intellectual, when compared with those of his master. As we have said, however, all gallery authorities are agreed that Rembrandt is the painter; and if it should be some day proved that they are mistaken, there can be no doubt that it is an original work by some master only inferior to Rembrandt, and an important addition to the treasures of the Gallery.

"The Entombment," ascribed to Michael Angelo, is a work of a very different order. Unlike the Rembrandt, it has no history, or one but of yesterday. It is an unfinished work—the *gesso*, or ground, being left in parts quite bare—about 5 feet 4 inches high and 5 feet wide; and it was sold for a trifle, among other unconsidered rubbish, from the collection of the late Cardinal Fesch. The dealer who bought it sold

it, along with some other pictures, for a few florins. But its new owner, Mr. R. Macpherson, the well-known photographer of Rome, having removed the dirt from the surface, saw that he had secured a prize. The best artists and judges of pictures in Rome concurred in forming a high estimate of its value, and the opinion came to be generally adopted, that it was one of the rarest of artistic rarities—an easel-picture by Michael Angelo. The unlucky dealer brought an action for the recovery of the picture from the purchaser; but the suit was compromised, the vigilance of the Pontifical authorities evaded, and the picture brought in triumph to London, where it was bought for the National Gallery, in 1868, for the sum of 2000*l*.

Artistic controversy appears to be even more stimulating than theological, at least in these degenerate days. The purchase of "The Entombment" for the National Gallery called forth stronger language than would the promulgation of a dogmatic heresy. "The Entombment" was declared to be "an unsatisfactory and emaciated mediæval group," "a trumpery picture," "fatuous and imbecile." To speak of it as the work of Michael Angelo was pronounced an absurdity, inasmuch as it is well known he never executed an easel-picture, holding oil-painting to be mere trifling, only fit for women and children.

An unprejudiced examination of the picture will certainly not bear out these assertions. If Michael Angelo spoke as is reported, the probability is that he had first tried the process, and found its tediousness irksome to his somewhat impatient temperament. The most cursory examination of his numerous drawings shows that, whatever was his later practice, he could design and finish with almost feminine delicacy and refinement. One easel-picture, a circular painting in *tempera* of "The Holy Family," he is known to have painted for his friend Agnolo Doni; Vasari having given a minute account of it, and of the circumstances attending the commission. This picture is now in the Tribune of the Uffizi at Florence, and certainly bears a marked resemblance to "The Entombment" in the heads of the Madonna and Joseph, the turn of the principal figure, the drapery, the careful execution, and the general feeling of the work. One or two pictures—and notably the unfinished "Virgin and Angels," belonging to the late Lord Taunton, which was exhibited at Manchester in 1857, and also at the British Institution—are with good reason attributed to him, and strengthen the attribution of "The Entombment." And this last is not an oil-painting, though parts appear to have been worked upon with oil-colours. It is a *tempera* painting, executed on a gesso ground in the manner of fresco; that is, the parts were finished day by day, whilst the ground was moist, as anyone will recognise who has seen a fresco executed. That it is an original picture, the work of a master, and of one at least as much a sculptor as a painter, every painter will acknowledge. The modelling of the dead body of the Saviour, and the throat and chest of St. John, prove this. Its unfinished condition renders it somewhat puzzling to those unaccustomed to follow, step by step, the progress of an elaborate picture, and tends to obscure the purpose of the painter; but ample testimony has been borne to its technical merits by painters like Cornelius, Leighton, and

Watts—men who have practised fresco as well as oil-painting, whose lives have been devoted to the study and practice of the higher departments of the art, and who are familiar with the greatest works of all periods; and their deliberate judgment may fairly be held to outweigh any amateur criticism.

Whether it is an early work of Michael Angelo, or by some contemporary artist, must, in the absence of direct evidence, be left to the judgment of those who are competent to decide. There is something of Ghirlandajo in it, but there is something beyond Ghirlandajo. We have studied it at different seasons, under every light, and in various moods of mind, and always received from it some new impression of power, and beauty, and feeling. If it be not by Michael Angelo, we, at least, know of no other painter to whom it can be attributed. The figure of the dead Saviour is, as far as we know, quite alone in art. The dead Christ in the "Pietà" of Francia is exquisitely sad and beautiful; but this is nobler, more refined, more pathetic—the placid sweetness and dignity of the countenance infinitely more solemn and impressive. The figures of St. John on one side, of Mary Magdalene on the other, though both supporting the body of the Lord, are contrasted with great skill, but without formality, and pose, form, and drapery are all carefully studied. Both are wholly but reverently occupied in their solemn duty. The same sorrowing reverence is exhibited in the noble head of Joseph, seen immediately above that of the Saviour, whose body he is assisting in carrying—or rather steadying, as the weight is evidently borne by John and Mary. The only other nearly-finished figure, that of Salome, who is seated on the ground on the left of the spectator, is described in the Catalogue as having her right arm raised, "as if examining something in her hand not expressed in the picture." This something, it has been suggested, with great probability, might be one of the nails that pierced the Saviour's hands or feet. But Salome is examining it no longer. The eyes are directed towards the object, but they do not see it. A dreamy abstraction has succeeded to vision. The mind is absorbed in mystic contemplation. Past and future are mingling in vacant, wondering reverie. The other figures on the right of the principal group—Mary the wife of Cleophas, and the Virgin—are only broadly indicated; but the latter, kneeling on the ground, appears bending under an overwhelming sorrow.

The great charm of the picture is its unity, lucidity, and ingenuousness. No insincerity is traceable anywhere—no mere prettiness, no playing with the subject. Nothing is inserted for effect. All is grave, simple, direct, earnest, reverent: a yearning, as it would seem, for something higher and holier than there is power to express. One can imagine that it was left unfinished, as Michael Angelo left later in life some of his statues unfinished, Da Vinci some of his pictures, from a sense of the hopelessness of fully realising the lofty ideal he had conceived.

Mr. Boxall's other purchases have called forth less comment, but are of much value. From the private collection of the late Sir Charles Eastlake, eight or ten pictures of various interest were obtained. The most generally popular is an admirably-painted full-face "Portrait of an Old Lady," making the sixth portrait the Gallery now

possesses by Rembrandt. For this 1200*l.* was given. The other Eastlake pictures were all of early date. Eight, by Italian painters like Domenico Veneziano, Vivarini, Fra Carnovale, and Cosimo Tura, chiefly of historical value, were obtained for a comparatively small sum. "The Madonna and Child Enthroned" of Vander Goes, purchased for 1,500*l.*, is a more interesting example of an early Flemish painter whose works are rare in this country; but still more interesting is the elaborate painting of "The Exhumation of St. Hubert, Bishop of Liège," ascribed to Dierick Bouts, or Stuerbout, as he is usually called—a work that points to the source whence Leys drew much of his inspiration, and one which, whether rightly ascribed to Bouts or not (when at Fonthill it was described as by Jan Van Eyck) is a good example of early Flemish work; for Bouts, though a Dutchman by birth, passed the greater part of his life at Louvain, and may fairly be regarded as one of the founders of the Flemish school. The "Rhetoric" and "Music" of Melozzo da Forli, bought at Florence, in 1866, for 600*l.*, are two of a series of decorative paintings executed for Duke Frederic of Urbino, about 1480, and are good specimens of a powerful early painter of whose works we previously possessed no example, and of whom there is no example in the Louvre. "The Angel Raphael with Tobias," purchased in 1867, adds another to the interesting pictures of Andrea Pollajuolo, a predecessor, and a worthy one, of Dom Ghirlandajo (to whom the "Virgin and Angels," No. 293, was formerly attributed) and his scholar Michael Angelo. The Gallery has now three of his best pictures. With the Pollajuolo was purchased a "Madonna" by Sandro Botticelli, both being from the collection of Count Galli Tassi, at Florence: the two were obtained for 1000*l.* A "Madonna and Child, with St. John," by Paolo Morando, known as Cavazzola, purchased at Verona, in 1867, for 900*l.*, is a fair example of a pleasing but feeble painter. Very different in character is the huge altarpiece, in three stages, called "The Madonna Enthroned," by Carlo Crivelli, of whose works we have now a sufficient number. This comprises five pictures in the lower stage, four in the second, and four in the third; the whole set in an immense and gorgeous frame (with a boldly-projecting canopy over the Madonna), constructed when the picture was erected, in 1852, in the private chapel of Prince A. de Demidoff, at San Donato, near Florence. The figure of the Madonna (engraved by D'Agincourt, Pl. 138), the central feature of the work, is signed and dated 1476, and was painted, therefore, when Crivelli was in the full maturity of his power, and well illustrates his peculiarities. The figures are strangely hard and dry, the hair liney, the features strongly marked and expressive, the draperies and accessories most elaborate—the whole evidently painted to produce a strong impression of awe upon uncultivated but reverent worshippers. The details are remarkable, as being among the latest and best-preserved examples of the mediæval practice of enriching the crowns, mitres, girdles, &c., of madonnas, saints, and bishops with real or fictitious gems, and endeavouring to produce, in various ways, a sort of deceptive imitation. The crown of the Madonna, the triple tiara and rich robes of St. Peter, and the like, still retain many of the pearls and jewels with

which they were originally resplendent; whilst the keys of St. Peter are in nearly as high relief as actual keys would appear so held, and depend from a piece of real rope. When in Prince Demidoff's chapel, it may have been thought the climax of ecclesiastic art; here, it is sadly suggestive of barbaric pearls and gold. It cost the nation 3360*l.*, in 1868; and perhaps it is well to have at least one example of the class.

The foreign pictures added to the Gallery during 1869 belong to the schools of the Netherlands, and are of a kind new to the collection. We already possessed a fine landscape by Albert Cuyp, and popularly Cuyp is only known as a landscape painter; but those familiar with the galleries of Holland know him also as a painter of portraits, still life (in the Rotterdam Museum he has some amazingly well-painted grapes and shellfish), and even of rustic scenes, after the fashion of Ostade and Teniers. The Cuyp bought in 1869 for the National Gallery is a portrait, so powerful in expression, and so admirably painted, that it may well be commended to the careful study of our young portrait-painters. With it was bought a "Vase with Flowers," by Jan Van Huysum—the vase of terra-cotta, with cupidons in low relief, flowers, fruit, a nest with eggs, butterflies, flies, dew, all imitated perfectly without trace or suggestion of the brush—a very triumph of manipulative dexterity, the bunch of pale-green grapes near the right-hand corner solving perfectly Titian's famous problem. For these two pictures Mr. Nieuwenhuys received 1800*l.*; and it was stated in the House of Commons that they were purchased at Christie's in 1867—the Cuyp for 384, the Van Huysum for 380 guineas, and hence it was inferred that about 1000*l.* beyond the market-price was given for them. But it by no means follows, that because they were knocked down for 764 guineas, the National Gallery could have obtained them for that sum. Mr. Nieuwenhuys is perfectly aware of the market value of a picture, and having marked these in the auction-room, he was not likely to let them slip from him readily. Had there been competitors, he might probably have run up the biddings to double the amount for which he obtained the pictures, and would certainly have done so had he believed them worth that price to him. The fact, perhaps, suggests the advisableness of watching more carefully our own sales, as well as those of the Continent; but these pictures are a real acquisition, and we need not grudge their cost. The latest addition (for which 1722*l.* was paid) is a capital specimen of the realistic pencil of Pieter de Hooge, the prince of matter-of-fact Dutchmen. The subject is "The Courtyard of a Dutch House," every brick and paving-stone of which is painted to perfection, whilst the principal group is the housewife watching her servant dish a fish by the kitchen-pump.

We have thus glanced over the purchases of foreign pictures from the foundation of the Gallery to the present year. But the Gallery has also been largely enriched by donations and bequests. Of the 436 foreign pictures now in the Gallery, 244 have been purchased, 95 presented, and 97 bequeathed. The foundation-gift of Sir George Beaumont has been already noticed. Next came that of the British Institution—the "St. Nicholas" of Paul Veronese, and Parmigiano's

"St. Jerome." Others of varying value followed, but mostly of single pictures, and impossible therefore to enumerate. Of recent gifts, the most interesting is that of twenty-two pictures by early masters, mostly of the German school, presented in 1863 by the Queen, in fulfilment of the wish of the Prince Consort, who was very desirous that the national collection should illustrate the historical development of art. The latest donations are:—An "Annunciation," by Carlo Crivelli, presented, in 1867, by Lord Taunton—interesting alike as an ecclesiastical study, as an excellent example of the painter's best manner, and for the view it gives of the condition, wealth, and appearance of an Italian city in the fifteenth century; "St. Anthony and St. George," presented by Lady Eastlake, in 1867, the only specimen the Gallery possesses of that rare old painter, Pisano of Verona; and, latest gift of all, "Cardinal de Richelieu," by P. de Champaigne (given by Mr. A. W. Franks, in 1869), and not only interesting as the only specimen we possess of a famous Franco-Belgic painter, but still more from its showing the Cardinal in full face and profile, exactly as Vandyck's celebrated Windsor picture shows Charles I.—the two pictures having been painted for the same purpose, that of enabling a sculptor at a distance to prepare a bust. This of Cardinal Richelieu was for the use of the Roman sculptor Mocchi, and the right-hand profile has inscribed over it, in French, "This is the best of the two profiles."

The bequests, having all been made prior to our former paper on the Gallery, will need but a passing notice here. The earliest—that of the Rev. W. H. Carr, in 1831—was also the most important. It comprised thirty-three pictures, among which were Leonardo da Vinci's famous "Christ Disputing with the Pharisees," landscapes by Claude and Poussin, and several other works of unquestionable value. Lieut.-Colonel Ollney's bequest of eight pictures, in 1837, included Lancret's "Seasons," and others of secondary interest; Lord Farnborough's, in 1838, was a pleasing selection of fifteen cabinet paintings, chiefly by Dutch and Flemish masters. Mr. Simmons, in 1846, left ten of a more miscellaneous character, but some very excellent. Eight years later, Lord Colborne left eight pictures of a higher class, including two capital portraits by Rembrandt, and good specimens of Berchem and Teniers. In 1855, the poet Rogers left the Gallery a favourite little Giorgione, "A Knight in Armour," an "Ecce Homo" by Guido, and a "Noli-me-tangere" by Titian. Three pictures, bequeathed by Lieut.-General Sir William Moore, in 1862, and two by Mr. Oppenheim, in 1864 (one of them a charming "Waterfall," by Ruysdael), are the latest bequests of foreign pictures, and complete our tale of this section of the Gallery.

Thus far we have confined our attention to the Foreign Schools, and almost exclusively to what are called the Old Masters. Indeed, until lately, it seemed to be assumed, by those who had the direction of its affairs, that an English national gallery had nothing to do with English painters. In every other country the national painters occupy a prominent place in the public collections; in ours they were few in number, and treated as though they were interlopers. No wonder, therefore, that foreigners should so resolutely refuse to accredit us

with having a national school, when we seemed so anxious to conceal its members. As has been already said, there were in the Angerstein Collection, purchased in 1824 as the foundation of the Gallery, the half-dozen pictures of Hogarth's "Marriage à la Mode," and three others by English artists. It is the fact—it might be considered a wonderful fact, were we not always wonderful in management—that for the thirty-eight years following, not a single picture by a British artist was purchased. As we all know, many had been given, but it is the purchases that determine the character of a collection, and of its managers. In the "Companion" for 1859, this neglect of British art was pointed out and dwelt on, but it would probably have remained unaltered, but for the great amount of interest manifested by foreign artists and amateurs in the older English pictures at the International Exhibition of 1862. Then, the matter being forced on the attention of the authorities, they were induced to purchase five English pictures from that exhibition—Gainsborough's portraits of Mrs. Siddons and Dr. Schomberg, Reynolds's portrait of Captain Orme, Crome's "Mousehold Heath," and Ward's "Alderney Bull." Two years later, Copley's "Death of Major Pierson," which had attracted much notice at the Exhibition of 1862, was purchased, making in all six British pictures purchased during Sir Charles Eastlake's rule. Under Mr. Boxall's governance, three British pictures have been bought. Gainsborough's portrait of Orpin, parish clerk of Bradford, Wiltshire, is in the painter's best manner, being painted freely and *con amore*. It was obtained, in 1867, for 325*l*. To "The Siege of Gibraltar," by Copley, bought in 1868 for 400*l*., no such commendation, nor indeed any kind of commendation, can possibly be given. It is merely the sketch, or study, for the large picture painted for the City of London, and now in the Guildhall, and necessarily does not possess even the interest of that sufficiently uninteresting picture. It is indeed difficult to conceive why it was bought. As a work of art, it is below criticism; as a representation of the event, simply ridiculous. It could not be as a specimen of the painter, for the Gallery already possessed his best works—the "Death of Chatham," and the "Death of Major Pierson;" and two specimens of so mediocre a painter would suffice for any gallery,—out of America. Martin's "Destruction of Pompeii" (bought for 200*l*.), the last of Mr. Boxall's three British pictures, makes, however, some amends for the Copley blunder; for though not a kind of picture of which it would be desirable to have many repetitions, it is yet one of which it is essential to possess at least a good specimen, and this is one of the best. The day has gone by for any intense admiration of Martin's immensities, but everyone who reads the merest sketch of the history of English art will look to the National Gallery for a picture by John Martin.

Very different is the aspect shown by the gifts and bequests of British pictures to that of the purchases. Of the foreign pictures, above 58 per cent. have been purchased; of the British not 5 per cent. The numbers, as we gather them from the official catalogue (1869), are—British pictures purchased, 18; presented, 207; bequeathed, 145: a computation, it must be admitted, more honourable to individuals than to the nation. The first gift was that of Sir George

Beaumont, immediately after the foundation of the Gallery, of the "Niobe" and "The Villa of Mæcenas" by Wilson, a head by Reynolds, the "Blind Fiddler" by Wilkie, and West's "Pylades and Orestes." From that time followed donations, mostly of single pictures, but amounting to 25 in all, down to 1847, when Mr. Vernon's munificent gift of 157 pictures, all but two by British painters, gave to the British section of the Gallery a new and definite character. Subsequent gifts have mostly been of single pictures, many of them portraits, and few of a very high order, one or two, like the latest gift, George Cruikshank's "Worship of Bacchus," being rather interesting on account of the subject or the artist than of much value as works of art. In all, 21 pictures have been added to the Gallery by gift since the splendid donation of Mr. Vernon.

The bequests were only nine in all, prior to that extraordinary one of our great landscape painter Turner (received 1853–57), which numbered upwards of 100 oil-paintings, besides "some thousand drawings and sketches in water-colours, &c."* This was followed, in 1859, by a most acceptable bequest of Mr. Jacob Bell, consisting of 19 paintings, including 7 fine works by Sir Edwin Landseer, and others by Leslie, Etty, Frith, &c. Ten more pictures have since been bequeathed by various persons, and have added alike to the variety and value of the general collection.

We are now in a position to look at the collection as a whole. In all, then, there are somewhat over 800 pictures, of which the larger half (about 440) belong to the Foreign Schools, being nearly all by what are called Old Masters; the remainder (about 370) are British—many of them being by living, but by far the greater number by deceased, artists.

If we further analyse the pictures, as arranged under the Foreign Schools, we shall find that about 252 of those exhibited belong to the Italian schools, and represent 121 painters. Of these pictures, 23 are by artists who flourished in or before the fourteenth century, 79 belong to the fifteenth century, and 130 to the sixteenth century and subsequently, or to the period of Raffaelle and his successors. Belonging to the Flemish school there are 50 pictures, by 21 different painters. Of these, 17 pictures belong to the fifteenth century, and 33 to the sixteenth century and subsequently. The Dutch pictures number 52, by 27 painters. Of these only one is as early as the fifteenth century. The German school has 15 pictures, by 14 painters. One of these, by William of Cologne, belongs to the fourteenth century, 5 to the fifteenth, and 9 are of later date. Spanish pictures are 8 in number, by 3 painters—Velasquez, Murillo, and Zurbaran—all of the seventeenth century. Belonging to the French school are 33 pictures by 10 painters, only one of which (by F. Clouet) is as early as the sixteenth century.

If we were to examine the Foreign Schools still more in detail, we should have to acknowledge that our National Gallery is still very incomplete, not only in each of the great schools of painting, but also in the leading painters. It is, however, advancing every year towards completion, and if more boldness were displayed in pur-

* Wornum: Introduction to "Catalogue, British School."

chasing, it would advance with great rapidity. Marketable pictures have a tendency to gravitate towards England. And this, to a great extent, because the continental galleries are mostly formed, and purchases are pretty much confined to exceptional pictures; whilst the English gallery is forming, and all really good, or at least representative pictures, are, or ought to be, acceptable.

As it is, our National Gallery will at present compare but indifferently, in respect of numbers, with many of the chief continental galleries, and not altogether satisfactorily with several of them, as respects the artists represented. Thus, against our 800 pictures, the Louvre can show above 1800 (to say nothing of those at the Luxembourg or Versailles), and of these 540 belong to the Italian schools, and 600 to the Dutch and Flemish. In Spanish pictures we are not so far behind, having 8 as against 16 at the Louvre; though we cannot, indeed, show portraits equal to those by Velasquez, or a Murillo like the "Immaculate Conception," for which the Emperor gave 24,612*l.* in 1852. In other schools, again, the Louvre contains no fewer than 12 accredited Raffaelles, while we have but 5; 18 Titians, while we have 8; 41 by Rubens, including the gorgeous Medici series, whilst we have only 11. But then we have 15 Rembrandts, to compare with the 16 of the Louvre; and perhaps in other comparisons we might come off as nearly equal numerically, and no doubt in many instances we should prove quite equal in quality. Taking the numbers given in the Introduction to the Official Catalogue, we find that the gallery at Dresden has 2200 oil-paintings, and many of these are of the highest quality, but many are very inferior. The Berlin gallery contains 1250; the Munich Pinacothek, 1280; the Belvedere, Vienna, 1550, without reckoning the modern works; and the Imperial Hermitage, St. Petersburg, 1630, of which 327 are Italian—but these are certainly not all genuine, and many have suffered terribly from restoration. Antwerp, again, has in its Museum a thoroughly enjoyable collection of 604 pictures (not 606, as stated in our Catalogue); Brussels one, perhaps almost as good, of 550; Amsterdam, 386; and the Hague, 304. But then a large proportion of these are by native painters; and of course the same remark holds good of those in the Prado at Madrid, the Royal Gallery and the Pitti Palace at Florence, and indeed most of the great collections. It is clear, however, as was said before, that we cannot for yet a long while hope to compete in extent with other great European galleries; but, with care and courage in buying, we may eventually bring our National Gallery into comparison with the best of them, for the range, authenticity, condition, and character of the paintings.

What the collection really is can be far better seen, now that the whole building is assigned to its exhibition, than when part of it was here, crowded into half the rooms, and the remainder at South Kensington. Not that the whole is shown even now. Some of the British pictures, including all by living artists, are still at South Kensington, while a few of the old pictures are withdrawn from exhibition for want of space or other reasons.

The present arrangement is confessedly temporary, but it serves to show what may be done with the collection, when an adequate

building is provided, augmented, and improved, as we hope it will have been by the time that building is ready for its reception. Even in the present rooms there is a certain amount of classification—just enough to suggest what to do, and what to refrain from doing, in the permanent arrangement. A great deal has been said about classifying the pictures, chronologically and according to schools; and there can be no doubt that many students would find assistance in such a thoroughly systematised arrangement. But to carry it out properly would require a range of pictures much greater than any gallery possesses. For a gallery like ours, which is destined for the gratification of the multitude * as well as for the assistance of the student, classification must be broad and clear. We may take with advantage the broad distinction of the Italian, Dutch and Flemish, German, French, and Spanish schools, and arrange the pictures with a general reference to the periods of their production. But we cannot with safety go much further. In the Introduction to the Official Catalogue of the National Gallery, we have the Italian painters, of whose works specimens are possessed, arranged chronologically under no fewer than thirteen distinct schools. Imagine the bewilderment which the adoption of such a classification, carried out practically, would produce in the ordinary visitor!

The present arrangement is broadly this:—The eastern half of the building, that in which the annual exhibitions of the Royal Academy were formerly held, with the rooms on the landing-place, and what used to be known as the Italian Saloon, is appropriated to the works of the Old Masters, the western half to the works of deceased British painters. In other words, eight rooms are given to the Old Masters, three to the British School.

Entering the Gallery, we find the first two rooms at the head of the stairs filled, as of old, with the more archaic Italian pictures, but somewhat differently arranged, and shown to more advantage. The immense Crivelli altarpiece occupies the chief place in the second room, its wondrous frame exciting unrestrained admiration in a large proportion of the visitors who stream through the room on a Monday or holiday, and little heed its neighbours, the exquisite Fra Angelico (663), or the saintly Lippi. The early German and some of the smaller Italian pictures, including the whole of the Prince Consort's collection, are in what in the Academy days was known as the Octagon or Print Room. The fine room added to the building by Mr. Pennethorne, and originally called the Italian Saloon, is now devoted to the works of the great Venetian painters and others that best harmonise with them. As may be supposed, in so well-lighted and handsome a room, they form a splendid company. Paul Veronese's magnificent "Family of Darius" occupies a good part of the right-hand wall, and directly facing it is Sebastian's masterpiece, "The Raising of Lazarus," supported on either hand by the glorious works of Titian, Garofalo, Romano, &c.—the end-wall being filled with Veronese's "Adoration of the Magi."

* 823,426 persons visited the Gallery in 1867, and 729,645 in 1868—an average of 4333 each day it was open to the public in 1867, and 3840 in 1868. The cost of the establishment, exclusive of the amount expended in the purchase of pictures, is about 5500*l.* a year; in the year ending March 31, 1869, it was only 5316*l.*

Passing onwards, we have collected in the next room the prime productions of the fifteenth century—that intermediate period between the old hard ecclesiastical mediævalism, of which we saw so many representatives in the first two rooms, and the full fruition of the art in Raffaelle and his contemporaries—the deeply pathetic "Pietà" of Francia, the Madonnas of Perugino, Pollajuolo, Beltraffio, and Treviso; and with them Da Vinci's "Christ and the Pharisees," Correggio's "Ecce Homo," Titian's portrait of Ariosto, and others by John Bellini, Morone, Paris Bordone, Morando, &c.—altogether a room that many visits would not exhaust.

By this is a narrow slip of a room that is quite a mine of pictorial wealth. Along the wall, facing you as you enter, is a line of cabinet gems altogether beyond price—Raffaelle's St. Catherine, holiest of all his saints, having on one side his exquisite Aldobrandini Madonna, on the other the peerless "Vision of a Knight;" and these being flanked by Giorgione's "Knight in Armour" (269), and Correggio's "Holy Family" (23); Fra Fillipo Lippi's two best works, "The Annunciation" (666), and "St. John and other Saints" (667), completing the range. On the opposite side are works, mostly small but very precious, by Pollajuolo, Solario, Del Sarto, Filippino Lippi, Masaccio, Antonello da Messina, Marco Basaiti, and the only signed work known by Bono Ferrarese. And then at one end of the room is "The Entombment," ascribed to Michael Angelo; at the other end a "Madonna and Child," by Raffaelle's father, Giovanni Santi, and another by his master, Perugino.

Beyond is what may be termed the Spanish Room, as containing the whole of our Spanish pictures—few in number, unhappily, but presenting a noble front thus grouped together, and supported by a worthy band of contemporaries, though not countrymen—the Carracci, Guido, Salvator Rosa, and the like.

In the next room we find old German and later French masters in somewhat incongruous but not ineffective companionship or rivalry—Claude's grand series of ten landscapes with Turner's favourite two ("Dido Building Carthage" and "The Sun Rising in a Mist") intercalated, by his own injunction, between the most famous of them—the works of the Poussins, Nicolo, and Gaspar; whilst on the other side are the marvellously preserved works of the Van Eycks and Memling, with those of Martin Schoen and Vander Goes.

Then, in the farthest room on this side, the Great Room of the Academy (and which, when the Gallery is reopened, will be found to be amazingly improved in the lighting), the chief works of the Dutch and Flemish schools are brought together. Rubens's four great pictures —the "Abduction of the Sabine Women," "The Brazen Serpent," "Peace and War," and "The Judgment of Paris"—glorify the entire breadth of the left or north wall; whilst his "Château de Stein" landscape occupies the centre of the opposite wall, and is surrounded by the works of Ruysdael, Hobbema, Teniers, De Hooge, Van Huysum, and other Netherlandish worthies. At the far end is Rembrandt's much-discussed "Christ Blessing Little Children," and about it a dozen uncontested works of the mighty Dutchman; whilst at the opposite end is a miscellaneous but highly interesting group by Memling, Dierick

Bouts, Quintin Matsys, and Van der Weyden—the various works of Vandyck, Cuyp, Gerard Dou, Teniers, Berchem, and Vandevelde filling the angles.

Turning to the British section, we find that the first two rooms are entirely devoted to the Turner pictures, his earlier productions being placed in one room, his later in the other. The third, or Great Room, at the extreme west of the building, is filled with the general collection of the works of deceased British painters—from Hogarth's "Marriage à la Mode" series, and the splendid portraits and landscapes of Reynolds and Gainsborough, to Wilkie's "Village Festival" and "Blind Fiddler," Etty's nudities, Stothard's amenities, Leslie's "Sancho Panza and the Duchess," Eastlake's over-refined "Jerusalem," and Ward's rough and vigorous "Alderney Bull."

The lessening space warns us that we must dwell no further on the pictures. Enough has, however, been said to show that, with all its shortcomings, the national collection is even now a noble one—not among the largest, but perhaps the most select and choicest in Europe—and that with a judicious and liberal purchase of strictly representative pictures, of the British as well as of foreign schools, supplemented as it is sure to be by bequests and donations, it cannot fail, in comparatively few years, to rank worthily with the richest gallery extant. But for that it must have enlarged boundaries. Already, as we have seen, several foreign pictures, many British works by deceased artists, and the whole of those by living painters, are unable to find places at Trafalgar Square.

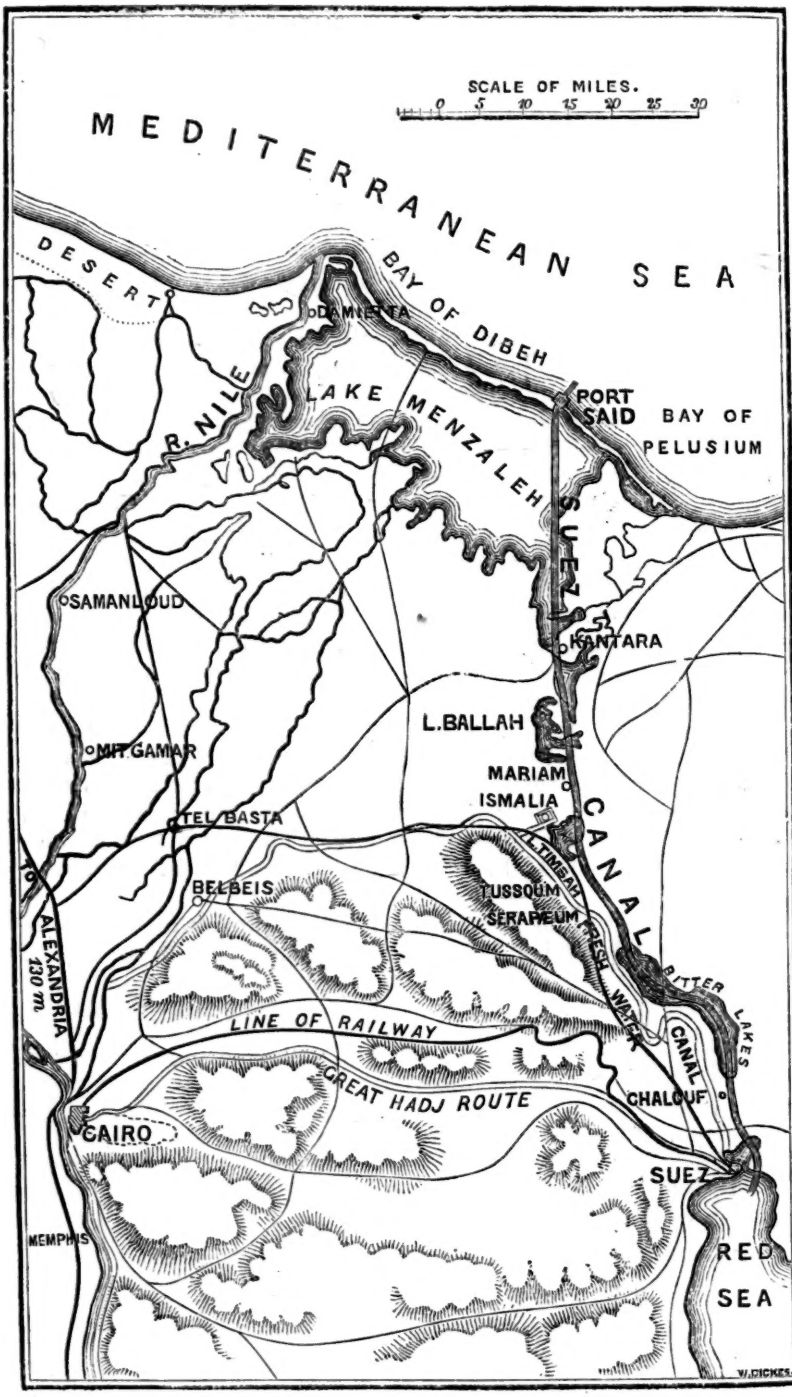
Successive Governments have announced their intention to erect a new National Gallery on the present site. The workhouse and some other buildings at the back of the Gallery have been secured, in order to obtain the necessary additional space, and, as we may hope—taking warning from the danger that so lately threatened the Dresden gallery—to secure complete isolation. Premiums were offered, two or three years since, for the best design for a National Gallery, and the victor in the contest, Mr. E. M. Barry, R.A., has been appointed architect for the new structure. The Director and Trustees have drawn up a report on the "requirements as regards the care and exhibition of the pictures" in the proposed Gallery. But the works are not begun, nor is it clear when they are to be begun. We confess to being in no hurry. The best speed in a work of this sort is to make haste slowly. The design of such a building cannot be too carefully matured. What is required is tolerably evident, but it is not exactly what an architect may be expected to supply. The new Gallery should be essentially a building for the convenient arrangement and adequate exhibition of the pictures. The exterior may be as handsome and commanding as the architect can design; but in the interior the pictures must be supreme. It should be emphatically a building for the display of the pictures, and not for the display of the architecture.

For a picture-gallery the baldest shed which the perverse genius of even a railway engineer ever invented, if it displayed the pictures perfectly, and permitted them to be studied with ease and comfort, would be preferable to the most superb palace, in which sumptuous

suites of rooms were planned mainly for architectural and scenic effect, and the pictures were ill-seen and subordinate. In his premiated design Mr. Barry gave us a splendid vision of this latter sort. The exterior was magnificent; the interior consisted of rooms such as it was quite delightful to wander through, though only in imagination. But with that triumph he may be well satisfied. Let him now, if called to erect the building, descend to sober reality. We shall be glad of an exterior the noblest, the best, and the most appropriate he can invent—one that we may point to with pride as worthy of the site and the purpose. But for the interior—whatever be his innate ideas on beauty and the fitness of things—let him for the nonce be sternly utilitarian. We want rooms sufficiently, but not too strongly, lighted. Mr. Pennethorne's Italian Saloon and the room in which Raffaelle's Cartoons are hung at South Kensington, are excellent models in this particular. The rooms should be so planned as to allow the pictures to be arranged broadly in schools, and with due regard to chronology. Broadly, not pedantically. There should be rooms in which the chief works of the great masters may be brought together for comparison and mutual illustration; rooms in which cabinet pictures may be examined, conveniently and leisurely; rooms in which pictures of distinct regions of thought may be kept apart—the laws of proportion and fitness not being wholly disregarded; rooms, finally, for choice old pictures, lent for awhile by their owners for public exhibition; and, withal, there must be ample provision for future extension. The rooms, or suites of rooms, should be as handsome and finely proportioned as art can make them, but not too elaborate or over-ornamented. In this respect the new exhibition-rooms of the Royal Academy are worthy of all commendation. They are well-proportioned, richly but soberly decorated; the materials are real, solid, and excellent, and nothing is obtrusive—the impression left by the whole being that of simple dignity. The eye is satisfied with the architectural effect; but the pictures are what the mind rests on.

If the architect of the new National Gallery provide us with rooms as handsome and suitable, but more satisfactorily lighted, we may be content.

JAMES THORNE.


SCALE OF MILES.
0 5 10 15 20 25 30
MEDITERRANEAN SEA
DESERT
DAMIETTA
BAY OF DIBEH
R. NILE
LAKE MENZALEH
PORT SAID
BAY OF PELUSIUM
SUEZ
SAMANLOUD
KANTARA
L. BALLAH
MIT GAMAR
MARIAM
ISMALIA
TEL BASTA
CANAL
TIMSAH
FRESH WATER
BITTER LAKES
BELBEIS
TUSSOUM
SERAPEUM
TO ALEXANDRIA 130 m.
LINE OF RAILWAY
CANAL
GREAT HADJ ROUTE
CHALOUF
CAIRO
SUEZ
MEMPHIS
RED SEA
W. DICKES.

THE GREAT SUEZ CANAL.

If distinct and oft-reiterated promises should be fulfilled, an engineering work of unprecedented grandeur and much importance will be opened about the time when this sheet is issued to the public. The exigencies of the press will not allow the printing to be delayed until that event has taken place; but it may be convenient to treat the enterprise as a *fait accompli*. We speak of the Suez Canal—a great ship-canal beginning on the shores of the Mediterranean, traversing the Isthmus of Suez, and ending at the extreme northern end of the Red Sea near the town of Suez. Whether it will ever pay as a commercial speculation, is a question for the future to solve; as are likewise two other questions—whether the canal will remain full of water and clear of sand; and whether it will increase the amity of nations jealous of a preponderating influence of any one of their number in that part of the world? But let the future reveal what secrets it may, the Great Suez Canal is, unquestionably, a bold conception, ably carried out thus far.

It is no cause for wonder that men should long have meditated on the advantages of a water-communication across this remarkable Isthmus. No other part of the world—with the possible exception of the Isthmus of Panama—offers so strong a temptation to canal-cutting. The vast continent of Africa hangs by a thread (as it were) to the south-western corner of the Asiatic continent. True, this thread is seventy miles wide even in its narrowest part; but such a width is a mere trifle compared with the dimensions of Africa—five thousand miles long, nearly as much in width, and having a coast-line of sixteen thousand miles. If the Greeks or Romans, the Phœnicians or Carthaginians of ancient times, wished to sail to the rich and mysterious East—celebrated for its gold, jewels, silks, and spices—they would have had to sail out of the Mediterranean, down the west coast of the Atlantic, round the Cape of Good Hope, and up or across the Indian Ocean. Indeed, they did not, in those days, know that there was any available maritime route whatever from the Levant and the Archipelago to the Red Sea and the Indian Ocean; for the records of ancient voyages round the Cape of Good Hope are not very reliable. But they *did* know that a narrow strip of land is all that connects Africa with Asia, and separates the Red Sea from the Mediterranean.

Although this strip of land is represented on our maps chiefly as a desert, it is, in reality, a region marked by many diversities of level and surface. Most of the surface-soil is sandstone, in many places disintegrated into fine sand. The general level is much interrupted by depressions, covered either by salt swamps or salt-water lakes. Indeed, there is one peculiar depression which extends almost from sea to sea, from one part of the Mediterranean all the way to Suez; it does not follow a straight line, but bends a little to the west near the middle. A general name for the central part of the depression is the Bitter Lakes, from the character of the water—or rather of the salt crust where there was once water; but there are other shallow depressions, lagoons, or marshes, called Lake Timsah, Lake Ballah,

Lake Menzaleh, &c. Where these lakes do not occur, there is a good deal of arid stony ground, earthy tracts covered with salt, and patches of sandy desert; grass, fertile tracts, and fresh water being almost unknown. A more uninviting region for settlement or colonisation could hardly be chosen. Whatever value attaches to it is mainly due to the fact that nature has made it a land highway from Asia to Africa, and that man may possibly cut across it a maritime highway from the Mediterranean to the Red Sea. Of the Red Sea itself, which bounds Egypt on the east, and is itself bounded on the other side by Arabia, it cannot be said that the characteristics are very favourable to the mariner. Owing partly to the nature of its shores and bed, and partly to the winds which prevail in that region, this long narrow sea has given rise to rather a bitter epigram, that "there are six months in the year when you cannot get into the Red Sea, and six months when you cannot get out." The sea, 1200 miles long, is thickly studded with coral reefs, so irregularly distributed as to leave no wide main channel quite free; while the north and south winds sweep rather fiercely along it during the periods of the alternating monsoons. The slight Arabian and Egyptian sailing-vessels even now often consume thirty or forty days to get from end to end; seeing that they always take shelter in some friendly nook, and anchor, perhaps for days together, when the dreaded gales are coming on. All this is now changed, however, so far as Europeans are concerned; steam-navigation has conquered the Red Sea as other seas and oceans, and the voyage is made in four or five days, even less. As to the heat, this must be borne—sandy deserts on both sides keep up a fierce temperature; but Europeans can and do bear it, and it must not be ranked among the insuperable obstacles to the use of the Red Sea as a great highway of nations, when traversed in conjunction with the Isthmus of Suez. It was Lieutenant Waghorn who, about 1836, conclusively ascertained that the Red Sea can be safely and swiftly navigated by steam.*

That a canal formerly existed across the Isthmus there can be no manner of doubt, although we possess but little information touching the extent to which it was rendered available in commerce. Aristotle, Strabo, and Pliny go so far back as Sesostris for the originator of the canal; but Herodotus is now believed to have been more nearly correct in attributing it to Pharaoh Necho, who flourished about 600 years before the Christian era. Not only is there a doubt who began it, there is equally a doubt who brought it to completion. Some award the honour to Darius, the great Persian king; whereas others assign it to one of the Ptolemies, a century or so after the time of Alexander the Great. This canal, it is now believed, commenced from the Red Sea at a point a mile or two from Suez, and ended at the town of Bubastis, on the easternmost branch of the Nile; it was somewhat under a hundred English miles in length, with a width varying from a hundred to a hundred and sixty feet. Although there are no trust-

* While writing this paragraph, a telegram comes to announce a catastrophe which tends to show that the safety of Red Sea navigation, even for steamships, cannot always be relied upon. On September 13th, 1869, the Peninsular and Oriental Company's mail-steamer *Carnatic* struck upon the rocky island of Shadwan, only a few hours after leaving Suez—entailing a sad loss of life and property.

worthy records of the early periods of the history of this canal, it seems pretty evident that the sand of the desert and the mud of the Nile gradually brought it to ruin. By the time of the Emperor Trajan (some say Hadrian), in the second century of the Christian era, the canal having become so choked up with sand as to be useless, he restored and reopened it. Natural causes, however, overpowered such enterprise as there was in those days; again and again the silting-up occurred; again and again was the channel cleared out—once by Amrou, the Arab General, under the Caliph Omar, who bestowed upon it the name of the *Canal of the Prince of the Faithful.* From about the middle of the seventh to the middle of the eighth century the canal was in use; the sand then conquered it finally, and the blocked-up but still visible track remained silent for more than a thousand years. Such were the facts known, with an approximation to correctness, down to the close of the last century, respecting the ancient canal; but the time was then approaching for a more exact inquiry into the subject.

When the First Napoleon had a temporary mastery over Egypt, his daring mind was filled with many vast schemes. His celebrated words concerning "Forty centuries looking down upon" the French army were intended to apply to military achievements in the first instance; but he had the arts of peace also in his thoughts. He knew that a canal had existed across the Isthmus of Suez in ancient days; and he dreamed of a ship-canal that might give France an easy maritime route to the East, possibly crowned by a conquest of India from the English. He set his *savans* and engineers to work to collect all available information touching the said canal. It was found that the ancients did not take a straight line across from Suez to the nearest point of the Mediterranean, but diverged so as to join the Nile at the eastern or Pelusiac branch—at that time navigable, but now wholly choked up with sand. The point of junction was near the island of Redah, where the Nilometer was placed which indicated the rising and falling of the great river. The canal went along what the Egyptians now call the Wady Tombat, or Valley of Seven Wells. The story goes, that 120,000 men perished by the exhausting labour of digging this canal. If so dreadful a tale was true, the calamity must have been owing chiefly through the want of water to drink, at places distant from the Nile.

The French, in 1799, formed an unfavourable opinion as to the prospects of a ship-canal—first, from the great scarcity of water over the whole surface of the Isthmus; and secondly, from a belief which they entertained that the level of the Red Sea is thirty-three feet higher than the Mediterranean, thereby necessitating the construction of a series of locks. An important error in this estimate of relative level we shall touch upon presently. The depression along which the ancient canal had been constructed appeared, according to the measurements of the French engineers, to be several feet below the level of the Red Sea during the greater part of its course; in fact, only a small part of the ground near Suez was believed to be really above the level of this sea. The detour made by Necho (or the Egyptian engineer who acted under him) in order that the depression of the

Bitter Lakes might be rendered available, gave to the ancient *Canal of the Kings* (as it was called) a length of ninety-two miles. When the Caliphs restored this canal, and made it the *Canal of the Faithful*, they had in view the convenience of Moslem pilgrims as well as the interests of commerce; the dwellers on the Mediterranean shore could ascend the Pelusiac branch of the Nile to Bubastis, the Egyptian Moslems could descend the same river to the same point, and then the new canal from Bubastis gave both sets of pilgrims access to Suez, whence they went to the holy cities of Mecca and Medina in Arabia. Amrou, the Egyptian engineer, made the point of junction nearer to Cairo than it had been in the more ancient canal, in order to increase the fall and volume of the water by which the Nile fed it. Such was the substance of the additional information brought to light by the learned and scientific men who were set to that duty by Bonaparte.

The story of the schemes proposed at that time, and why the whole affair was abandoned, is soon told. M. Lepère, and other engineers belonging to the corps of Ponts et Chaussées, suggested a plan which would have been virtually a restoration of the old canal. The water-communication from Suez to the Pelusiac branch of the Nile was to be cleared out; the bed was to be deepened; the connecting canals at Cairo and Alexandria were to be enlarged, and a subsidiary canal constructed from Serapeum to Tineh; seven locks were to be constructed, and a large reservoir formed near the centre of the canal, at the starting-point of the extension to Tineh. An estimated depth of eighteen feet of water was expected when the Nile was at its full. A great defect in the scheme, however, was the admitted uselessness of the canal for about four months in the year, when the Nile would not furnish water enough to feed it, even for vessels of very light draught. As the drifting of sand from the desert was apprehended, M. Lepère proposed to construct masonry walls four feet high at the margins of the canals. He doubted the possibility of forming a Mediterranean mouth of the canal which would escape the choking action of desert sand and Nile mud—rendering access to the port, whether at Tineh or at any other spot, difficult if not impossible. All the details of a plan were marked out on paper with much fulness, for a canal from Suez to Bubastis. Twelve miles of the canal, from the last-named town, were to be scoured out and kept full by a current from Cairo; the next section, to Serapeum, it was hoped would be available for navigation from about August to March, during which month sufficient water would flow in from the Nile; the third section, through the valley of the Bitter Lakes, was to be fed from the Nile and the Red Sea alternately, according to the varying levels of the two sources; and the fourth section, from the Bitter Lakes to Suez, would be supplied from the Red Sea through the intervention of locks and reservoirs. Opinions have varied much concerning this scheme of M. Lepère; but the disasters which befel Bonaparte in Egypt put an end to this as to many other grand projects.

The French, ever since the period just adverted to, have taken a warm interest in the affairs of Egypt, especially in connection with the means of access to the Red Sea. It is only natural that they should do so—seeing how important to Marseilles, and to France

generally, would be a ship-canal across the Isthmus; and seeing, moreover, that French engineers had already examined the subject in many of its aspects. On the other hand, the English have a peculiar interest in maintaining the Isthmus as a great highway for all nations, and not as a region which might be barred against us during a war with France. The *Overland Route* has rendered a free and safe passage across the Isthmus absolutely indispensable to any rapid communication between England and India—unless, indeed, the Euphrates route should ever be rendered available by railway.

Let us trace the bearing of this question. In the old days of sailing-ships, the men-of-war and the East Indiamen had a very wearisome course to pursue in making the voyage from England to the East: down the whole Atlantic seaboard of Europe and Africa, round the Cape of Good Hope, and then battling up north-east to India and China. The time of these voyages became greatly shortened by the introduction of steam. Mail-steamers first began to run between England and the Cape in 1850. Even a quarter of a century earlier, in 1825, a steamer named the *Enterprise* performed the whole voyage to Calcutta; but nothing was gained, for the voyage was of four months' duration. In more recent times the *Great Britain* and other fine vessels have been in the habit of making steam-voyages to India and to Australia, very convenient for ordinary passengers, emigrants, and general cargo. No possible voyage by that circuitous route, however, can be sufficiently rapid for the exigencies of postal communication; and hence the eagerness to find some way across the Isthmus of Suez which would at once render available both the Mediterranean and the Red Sea. It was easy enough to establish a line of steamers from England to Egypt and the eastern end of the Mediterranean, and another from the Red Sea or the Persian Gulf to India; but in what way should the intervening dry land be crossed, and at what point? In order to aid towards a solution of this question, a Euphrates expedition was sent out in 1836 under Colonel Chesney. It was found that the town of Bir, on the Euphrates, is only a little more than a hundred miles from the extreme eastern end of the Mediterranean, and that there is river-communication thence for nearly a thousand miles down the Euphrates to the Persian Gulf. But the difficulty is this: that however easily a vessel might steam *down* the stream, there would be terrible obstacles on the *up* voyage, owing to a difference in level of 628 feet between the two ends of the river. This and other embarrassments have prevented anything further from being done in the matter; and the "Euphrates route," as it is called, still remains a question of the future. Not so the "Suez route;" this has had a more fortunate history. In 1837 the British Government entered into an arrangement whereby the "Overland route" was virtually commenced. A steamship company took out the mails from Falmouth to Gibraltar; Admiralty steamers forwarded them from Gibraltar to Alexandria; smaller steamers bore them up the Nile (and the subsidiary Nile canal) from Alexandria to Cairo; caravans took them eighty-four miles across a desert from Cairo to Suez; and then the *Hugh Lindsay*, a steamer belonging to the East India Company, conveyed them to Bombay. Judged by our present ex-

perience, the plan was an awkward and troublesome one; but it contained within it the germs of vast improvements. The mail-time from England to Bombay was at once reduced from about one hundred and ten days to fifty-five. In 1839 a further shortening was effected, by sending a portion of the mails (for which a higher postage was consequently charged) from Calais through France to Marseilles, whence an auxiliary steamer started to overtake the regular mail at Malta. Again was an improvement made in 1840, when the newly-organised Peninsular and Oriental Company undertook to run large and powerful steamers all the way from Falmouth (afterwards transferred to Southampton) to Alexandria, without necessitating any transhipment of passengers or mails at Gibraltar. Carrying on our glance five years later, we find in 1845 a system commenced whereby the Red Sea was traversed by steamers far larger than the *Hugh Lindsay*, and bound not only to Bombay, but to Ceylon, Madras, Calcutta, Singapore, China, and Australia.

These were the steps, then, by which Suez was made an important point in the quick mail route from England to India. Then arose an interesting question—What can be done with the strip of desert which must be crossed before Suez can be reached? Caravan-omnibuses, whether drawn by camels or dromedaries, horses or mules, asses or any other quadrupeds, are necessarily slow, and very exhausting to passengers in sultry weather; they went along the Great Hadj, or pilgrim route from Cairo to Suez—always hot and always sandy. As early as 1834 Mehemet Ali, the astute ruler of Egypt, employed Mr. Galloway, the engineer, to survey the flat region between those two towns, to ascertain its fitness as a railway route. The jealousy of the French Government, who did not wish to see the English powerful in Egypt, deterred the Pacha from proceeding with a scheme which he had virtually sanctioned; and the troubles between him and the Sultan in Syria soon afterwards placed the whole subject in abeyance. At a later date another Pacha took up the scheme of a railway route—not, however, from Cairo to Suez, but from Cairo to Alexandria. His object was to improve the passenger and commercial intercourse with Europe by substituting railway transit for slow voyages up and down the Nile. The late Robert Stephenson carried on this work; and afterwards—placing much more faith in railways than in canals—he extended the rail from Cairo to Suez. Thus was completed an iron road across the Isthmus, not by any means on the shortest route, but so planned as to connect the three important places, Alexandria, Cairo, and Suez. The Anglo-Indian mails have been conveyed by this route since 1858—with a still further shortening of the time for special letters, passengers, and light cargo, by taking the route through France from Calais to Marseilles, and then by special steamer from Marseilles to Alexandria, without stopping at Malta.

We have deemed it desirable to say thus much concerning the Overland route and the Egyptian railway, on account of the bearing those matters exerted on the canal schemes—to which we now proceed.

Captain Vetch, of the Royal Engineers, some years ago broached a scheme for making a canal, by means of British capital and British labour, in as direct a line as possible from Suez to Tineh on the Medi-

terranean, without touching the Nile at all. On his plan the distance from sea to sea would be only seventy-five miles. Assuming the correctness of the French estimate, that the waters of the Red Sea are thirty feet higher than those of the Mediterranean, Captain Vetch calculated that his proposed canal would have a gradient of five inches per mile from end to end. With a canal one hundred and eighty feet wide at the top, ninety-six feet at the bottom, and twenty-one feet deep, he considered that the steady descent of water due to this gradient would produce a *scourage* sufficient not only to keep the channel clear, but also to wash away the sand and mud which would accumulate at the Mediterranean mouth. Captain Vetch distrusted the lakes and natural depressions visible on the Isthmus; he doubted whether the water could be kept under due control if those lakes formed parts of the canal; and he urged that it would be much better to excavate a thoroughly new and complete channel as nearly in a straight line as possible, without lakes and without locks. He thought this work might be done for two-and-a-quarter millions sterling—an estimate, however, which would, in all probability, have been wofully exceeded. In case of any unforeseen difficulties connected with this direct route, Captain Vetch suggested an alternative plan for a cutting of forty-seven miles from Tineh to the chain of lakes, and another of fourteen miles from Suez, making the lakes available for the intermediate distance; but this alternative he viewed with no great favour. He combated various objections urged against his pet scheme. He believed the soil to be sufficiently tenacious to hold without walling the excavation; but he would strengthen the channel with strong ribs of masonry placed about a mile apart. He would get rid of the shallowness of the water at Suez harbour by carrying his canal a little farther down, and constructing piers bounding an extensive wet-dock. He would also construct piers at the northern end of the canal. This scheme, made public more than thirty years ago, fell to the ground; but it is worthy of notice, because it was evidently suggestive to the remarkable man who afterwards threw his whole heart and soul into the subject.

Years rolled on. A canal was made from Alexandria to Cairo, or part of the way, to avoid certain difficulties in the navigation of the Nile. A railway (as we have shown) was formed, first from Alexandria to Cairo, and then from Cairo to Suez. Steam mail routes were established through nearly the whole length of the Mediterranean from Gibraltar to Alexandria, and through the whole length of the Red Sea from Suez to Aden. Still the grand canal scheme was not forgotten. Men formed an imaginary picture of a ship sailing or steaming across the Isthmus of Suez, and defying the land-link which connects Africa with Asia. Not only France, but other European States, became more and more interested in this problem of a ship-canal; they more and more desired to know whether the old "Canal of the Kings" and "Canal of the Faithful" could be restored, or whether it would be desirable to strike out a more direct route straight across the Isthmus. So long as an opinion prevailed that there is a difference of thirty feet in the water-level of the two seas, all the speculations and discussions on the subject of a canal took their

direction from this starting-point: some engineers urged that a lock or locks would be necessary; while others contended that, if the canal were made of small width and depth in the first instance, the force of the water, running through it from the Red Sea to the Mediterranean, would by degrees enlarge it to dimensions suitable for shipping. But there gradually arose in the minds of experienced men a desire to obtain a reliable answer to a plain question—*Is* there any difference of level between the two seas? Geologists, geographers, hydrographers, and engineers had often expressed some doubt on this matter. At length the doubt was set at rest. In 1847 the English, French, and Austrian Governments agreed to send out a joint commission of scientific men to take levels in various parts of the Isthmus of Suez, and ascertain the relative levels of the water in the two seas which it separates. Mr. Robert Stephenson represented England; M. Talabot was sent by France, and M. Negretti by Austria; while Linant Bey officiated as an extra commissioner to represent the Pacha of Egypt. They divided the work between them—Stephenson watching and measuring the rise and fall of the tide at Suez, Negretti doing the same at Tineh; while Talabot and Linant Bey made a trigonometrical survey of the intervening Isthmus, with a rigorous attention to levels. The most important result of this scientific proceeding was a demonstration that the two seas *have exactly the same level*, within a few inches. A host of difficulties was thus swept away at once. The engineers who might chance to be employed on any scheme for canaling the Isthmus now knew what they were about; they were no longer hampered by any supposed necessity for dealing with a descent of water along a channel from the Red Sea towards the Mediterranean. All the difference ascertained was, that the rise and fall of the tide is somewhat greater in the one sea than in the other: the mean level is almost exactly the same.

No sooner had M. Talabot returned to France than he broached the subject of a great ship-canal across the Isthmus of Suez. He developed a plan, and published a sketch of it in the "Revue des Deux Mondes." But while this plan was under discussion, a new character appeared upon the scene—one who was destined to be more intimately associated with the project than any other person. M. Ferdinand de Lesseps, the son of an eminent French diplomatist employed at various sovereign courts, and himself in friendly communication with the Pacha of Egypt, took advantage of his opportunities to secure those prospective benefits which are connected with *concessions*—a sort of privilege much better known on the Continent than in England. He obtained, as a *concessionaire*, the exclusive privilege of forming a ship-canal from Suez to Tineh. M. Talabot's plan was for a canal from Suez to Alexandria, but M. de Lesseps eclipsed him, through the influence of the exclusive rights obtained from the Pacha.

The new *concessionaire* took the surveys of 1847 as the basis of his plan, and employed two engineers to draw up details. His canal would be more bold and vast than any that had preceded it. It was to be 90 miles long, 330 feet wide at the water-line, and sloping at the sides down to the bottom, which was to be 20 feet below low-water Medi-

terranean level. A sluice-lock, 330 feet by 70, would be formed at each end. So far as concerns the mere cutting of the canal, it would be a large but straightforward work—expensive, but not difficult with an abundant supply of labour. At the two ends, however, the case was very different. The surveys of 1847 had shown pretty clearly the magnitude of the works which would be necessary at the termini. A ship drawing twenty feet or more of water could not possibly enter the canal through sands and shoals: it must have deep water throughout. Now at Suez there is *no* deep water: the Red Sea is shallow for a considerable distance out. An artificial harbour would be necessary, protected by walls or piers of masonry extending three miles into the sea, and kept permanently dredged clean to a depth of twenty-three feet. At the Tineh end the obstacles would be still more formidable. The Nile, it has been calculated, pours out no less than thirty million cubic yards of fine mud and sand every year into the Mediterranean. This mud and sand, which we may together call *silt*, is drifted by currents eastward until it comes near Tineh, and, in fact, for scores of miles along the coast, where it deposits itself. In this way the highlands of Abyssinia are virtually being transferred to the bed of the Mediterranean, in the form of fine silt washed down by rains and streams. To make a navigable mouth for the canal at this point, therefore, would necessitate the excavation of a channel through the wide bed of silt, and the provision of walls or piers which would prevent the channel from silting-up again. So extremely shallow is the Mediterranean along this part of the shore, that the engineers believed it would be necessary to make the piers *five miles long*, in order to carry them out into deep water, and to enclose a harbour sufficient to form a northern entrance to the canal. At Suez the piers would be two miles shorter, and there are stone quarries within a moderate distance that would supply suitable material. But on the Mediterranean there is not a stone quarry of any kind within scores of miles, and no one could tell whence the four, eight, or twelve million cubic yards (for thus did the estimates differ) could be obtained. Such were the conclusions at which M. de Lesseps and his engineers arrived. How far the lengths, widths, depths, and quantities were subsequently modified, we shall see further on.

M. Talabot did not at once give way to M. de Lesseps, for there were engineers who preferred his scheme. True, his canal from Suez to Alexandria would be 256 miles long, but it would start from a point in the Red Sea where there is deep water close in shore, and it would end near Alexandria, where the Nile is broad and navigable, taking Cairo in its way. With a map open before us, we shall see that Talabot's canal would have coincided very nearly in direction with the railway now open and at work. Certainly it would have been a formidable affair, comprising (it has been estimated) twenty times as much work as the Caledonian Canal—one of the most costly of our British enterprises in this class of engineering. It would have involved the construction of an aqueduct across the Nile, forty feet above the level of high water, three quarters of a mile in length, reached by four gigantic locks at each end, and wide and deep enough for sea-going ships. Moreover, there would be no possibility of supplying

the elevated viaduct with water except by pumping up from the Nile by steam-power—a formidable item of permanent working expense. English engineers knew perfectly well that Talabot's scheme was a practicable one; they could have worked out the details in all parts, and handed over the canal to the Pacha in a finished state; but they estimated the cost at vastly more than Talabot's figures (200,000,000 francs, or 8,000,000*l.*); and they felt little justification in expecting that the net profits of working would ever make it pay as a commercial speculation.

Long and animated, expostulatory and often bitter, was the correspondence maintained by M. de Lesseps with various influential persons in England. He had no commission from the Pacha to construct a canal; he had only a concession, privilege, or monopoly; and he now wished to make that concession profitable to himself. He proposed the formation of a joint-stock company, with a large number of English as well as French shareholders, to purchase his concession, and to construct the canal. But his overtures were unfavourably received. English engineers contended that, even if constructed, Lesseps' canal could not be maintained in working order without a constant enormous expenditure for dredging away the silt which would accumulate at the Mediterranean mouth; while capitalists asserted that the probable traffic would not possibly pay an adequate dividend on the inevitable outlay of capital. It was unfortunate for the scheme that the foremost engineer in England, Mr. Robert Stephenson, set his face against it; he could never get rid of the sand and silt and mud, which seemed to haunt his imagination whenever he thought about the canal. He and others admitted that a canal for local purposes, fitted to receive vessels of three or four hundred tons burden, could be constructed from Suez to the Damietta branch of the Nile at a moderate cost; but this would not have suited the views of Lesseps, Talabot, or the French generally, who had bent their minds on a *ship* canal through which a ship of deep draught could pass uninterruptedly from Marseilles or Toulon to the Indian seas.

There was another difficulty in the way. The late Lord Palmerston objected to the scheme in a political point of view. He has been blamed for this, on the ground that national jealousy ought not to interfere with great works of world-wide usefulness. But unless the archives of this and that Foreign Office were laid open, we should not be in a position to judge how far the blame was deserved. It may be that the French really liked the scheme because it would give them a power in the Indian seas never hitherto possessed by any but the English, a mighty leverage in case of war or adverse diplomacy. If this were the case, then Lord Palmerston's tactics may perhaps be regarded as a kind of political game at chess, in which check was met by countercheck. Let the explanation be what it may, however, English capitalists — in view of Lord Palmerston's objections on political grounds, and Robert Stephenson's on engineering data—held aloof from the Suez Canal scheme.

It may almost be said that a seven years' (paper) war took place between England and France on this subject; seeing that it began in 1848, and continued until 1855. During this interval a renewed

examination of the Isthmus was made, showing conclusively that the mean level of the two seas is as nearly as possible equal. The favourable opinion of Stephenson, however, could not be obtained; and he continued his operations on the railway schemes. The Pacha, in 1855, seeing clearly that a canal, on either of the proposed plans, would be important to his country, whether or not profitable to himself as an individual speculator, made a diplomatic move. He invited the European governments which were most likely to be interested in the matter—England, France, Austria, Prussia, and Holland (Italy was in those days only "a geographical expression")—to send over a commission of engineers to Egypt, in order that Talabot's and Lesseps' schemes should receive a searching examination. After this commission had made a report, in which approval, disapproval, and suggestion were combined, the Pacha appointed a commission of his own, in 1856, to bring the matter to some definite issue. And a definite issue *was* arrived at. It was decided that M. de Lesseps' plan, with one important and many minor alterations, would probably prove remunerative. Hereupon a company was formed—the "Compagnie Universelle du Canal Maritime de Suez"—to have its commercial headquarters in France; the Pacha himself took a heavy pecuniary interest in the venture, while M. de Lesseps became installed as the controlling genius of the situation. Half the shares were taken in France, one fourth in Egypt, very few in England.

It will not be necessary here to trace the tangled web of negotiation whereby the original *status* of the company underwent change. There was an evident possibility that, by the original concession, France as a nation (and not merely French speculators) might eventually become owner of a strip of land from the Mediterranean to the Red Sea—a power which European States generally could not view with favour. After many compromises, and the payment of large sums of money by the Pacha, the plans have been settled in the following way. The land on either side of the canal is to be retained by the company for ninety-nine years. The quantity of this land is only to be sufficient for the purposes of the canal, and for the various works at Port Saïd, Ismailia, and Suez; none of it is to be sold to other parties. All persons residing upon the conceded land are to be subject to the same local and consular jurisdiction as residents in other parts of Egypt. Some of the privileges originally conceded to the company by the Pacha have been bought back by him at very high prices; some others he has not been able to fulfil, and has paid compensation by remitting certain demands to which he would otherwise have been entitled. For instance, the *corvée* or forced labour of twenty thousand fellahs, or Egyptian peasants, had formed an item in the original arrangement; this was afterwards abandoned; and the Pacha had to make compensation for the higher wages at which the company were obliged to employ free labour. The increase of cost attendant upon this change in the mode of obtaining labour has been estimated at not less than one million sterling. In these and in other ways the Pacha has become heavily interested in the scheme. M. de Lesseps has had to fight many battles with the shareholders, owing to the constant increase in the expenditure, and the great delay in

finishing the works; but his indomitable energy, and his unbounded faith in the eventual success of the scheme, have carried him through all difficulties thus far. There can be no question that he has been ably supported by his collaborateurs—Voisin Bey, the director-general of the works; MM. Laroche, Larousse, Berthoult, and Gioia, engineers of the four sections into which the work was divided; MM. Borel and Cavalley, contractors for the greater part of the canal; and MM. Dussaud Frères, contractors for the heavy works at Port Saïd.

It was decided that the Mediterranean end of the canal should be, not at Tineh, but in the middle of a narrow spit of sand which separates Lake Menzaleh from the sea, several miles west of Tineh. The other lakes—Ballah, Timsah, and the Bitter Lakes—were to be taken advantage of in other portions of the route. It was hoped that about two-thirds of the distance might be wrought by dredging these shallow lakes, leaving only one-third to be effected by cutting through rock. In these various works M. de Lesseps' engineers and workmen have been engaged during the last thirteen years, but with especial energy for the latter half of the time. The actual digging began in 1856. In 1858 M. de Lesseps put forth a sanguine promise that the two seas and the Nile would be connected by a narrow water-channel in 1860; that in 1862 the width would be magnificently increased; and that, in 1864, the canal would be finished and full of water—at a total cost of 6,000,000*l*. A woful under-estimate this, both of time and money!

Before describing the several sections of this great work, and the modes in which they were executed, it will be necessary to draw attention to a distinction between three different component canals which have given rise to some confusion in the minds of English readers. These are the *Great* or *Maritime* Canal, the *Service* Canal, and the *Fresh-water* Canal. The Great Canal is the *magnum opus*, the water-passage through which large ships are to steam or to be tugged, if M. de Lesseps' aspirations are destined for realisation. With a depth equal to the draught of large mail-steamers, and without locks, it will be a work which nothing of the kind in Europe can parallel. The *Service* Canal, about 20 feet wide by 5 feet deep, was constructed chiefly to facilitate the larger work. It ran for some distance across the Isthmus, and has been invaluable in conveying men and materials from the Mediterranean. We speak of it in the past tense, because—whether it has been kept up, or whether portions of it have been absorbed in the width of the Great Canal—its main purpose was temporary, as an auxiliary work. The *Fresh-water* Canal tells its purpose in its name. If the Service Canal was indispensable in bringing men and materials, the Fresh-water Canal was still more indispensable in supplying them with fresh water in a region where scarcely a drop could be otherwise obtained. In what way the river Nile is made contributory to this beneficial end we shall see presently: it will suffice here to say, simply, that the cutting of the two minor or subsidiary canals was easy work.

As the Maritime Canal does not present the same dimensions in all parts, it will be desirable to show how the figures vary. For

nearly four-fifths of the entire distance, the canal is 327 feet wide at the surface of the water, 72 feet wide at the bottom, and 26 feet deep. The lower part of the side has a slope of two horizontal to one vertical; but above and a little below the surface of the water the ratio is five to one; while a horizontal beach connects the two slopes. It is found that the effects of the wash on the banks are greatest at and a little below the water-line; this part of the slope is made very flat, or nearly horizontal, and the contractors are protecting it with rough stone-pitching; but Mr. Fowler has expressed an opinion that a masonry lining of greater depth and completeness will be necessary if the canal is ever to have a large traffic with steamers moving at any considerable speed. The lengths of canal formed in this way are:—

Port Said to El Ferdane . . .	37 miles.
Through Lake Timsah . . .	5¼ „
Through the Bitter Lakes . . .	23¼ „
At and near Suez	11 „
	77 „

The other portions, making up the remaining one-fifth, are 196 feet wide at the surface of the water, 72 feet wide at the bottom, and 26 feet deep. The slopes are two horizontal to one vertical, with one or more horizontal trenches 10 feet wide. The portions of the canal having these dimensions are the following:—

El Ferdane to Lake Timsah . .	9½ miles.
Lake Timsah to the Bitter Lakes .	7½ „
Chalouf Cutting	5 „
	22 „

This reduced surface-width has been adopted in the deep cuttings to lessen the enormous quantity of excavation. The three sections here named may be briefly distinguished as the El Guisr cutting, the Serapeum cutting, and the Chalouf cutting—all being excavated in plateaux or high ground.

Certain specialities in many of the above-named places will be noticed presently; but the following were the general or prevalent modes of working adopted. The vast quantity of earth, stone, sand, and mud which had to be excavated to form so vast a channel necessitated the use of ingenious and powerful machines, as well as vast bodies of men. During the earlier years of the work manual labour was mostly employed, and also in the spots where the stuff to be dug up was too hard for the dredge. Egyptian fellahs, sooty blacks from Nubia—Arabs, Syrians, Sicilians, Greeks, Dalmatians, Croats—all assembled in thousands, finding that they could earn from 1*s.* 6*d.* to 4*s.* per day in labour requiring no particular skill: quite a godsend to the African portion of the mass. As there was the stupendous quantity of 96,000,000 cubic yards to be excavated, the aid of machinery became necessary: else the delay in finishing would have exhausted the patience of all concerned. Upwards of sixty dredging-machines were employed, some of them reaching seventy-five horse-power—by far the largest ever yet constructed. Each machine had a chain of iron

buckets, travelling diagonally upwards from the bed of the canal to a considerable height above the deck. The stuff thus dredged up was disposed of by two kinds of machines, both very remarkable in character. One of these was called the *drague à long couloir*, or "long-shoot dredger." Jutting out from the top of the dredging-vessel, almost horizontally, was a *couloir*, spout, trough, or shoot, no less than 75 yards long, 5 feet wide, and 2 feet deep. The dredged stuff fell from the iron buckets into this shoot, along which it was impelled in a continuous stream by a flow of water, and carried landward beyond the margin of the canal, where it helped to form a permanent embankment, by hardening under the fierce heat of an Egyptian sun. The largest of these machines dredged up 170,000 cubic yards per month. The other kind of machine, the *élévateur*, or "elevator," was wholly detached from the dredging-vessel. Punts were drawn up by the side of this vessel, each containing seven boxes of about five cubic yards capacity. The dredge-stuff was emptied into these boxes from the buckets, and the punt was navigated to one side of the canal. Here the *élévateur*, by means of a wire rope, lifted the boxes one by one out of the punt, ran them along a tramway, and then caused each box to open by a hinged door at one side, and the stuff to drop out. The tramway was supported on a framework, which projected sixty feet or more landward, so as to deposit the stuff far beyond the actual margin of the canal. The empty boxes ran along a second line of rails back to the punt, which conveyed them to the dredging-vessel to be refilled. The use of the *couloir* in some places, and the *élévateur* in others, depended mainly on the levels of the canal and the surrounding country; but in both cases the dredge-stuff (mostly mud and sand) helped to form a broad and serviceable rampart or embankment.

The following are some of the more noteworthy features which the ninety-nine miles of canal present on the way from the Mediterranean southward to the Red Sea:—

Port Saïd.—This place, it may fairly be said, has been created by M. de Lesseps. He selected this part of the coast as the entrance of his canal, because deep water is not so far out as at Tineh and other places; he found this depth at about 2870 yards from the shore. He named the place Port Saïd, in compliment to the late Viceroy of Egypt, Saïd Pacha. The locality is about midway between Alexandria, at the mouth of the principal branch of the Nile, and Joppa or Jaffa, in Palestine—say 140 miles from each. The Bay of Dibeh is on the west, and the Bay of Pelusium on the east, both separated from Lake Menzaleh by a narrow spit of sandy land. Port Saïd has grown up into a town of many thousand inhabitants, wholly in consequence of the canal operations. It boasts of its docks, basins, quays, and a mixture of Franco-African buildings, somewhat similar to those seen in Algeria. Two moles, breakwaters, or piers jut out into the sea, to enclose a space for the harbour. These moles are not half so long as the engineers at first thought would be necessary on the Mediterranean coast. The easternmost is 2070 yards, the other 2730; their distance apart varies from 760 yards at the outer end to 1530 yards at the inner. They are formed of huge blocks of *béton*

or concrete, on account of the impossibility of finding available stone within a reasonable distance. Each block contains 12 cubic yards, weighs 22 tons, and has cost (labour and materials included) 13*l*. The material consists of two-thirds sand (dredged up from the harbour), and one-third hydraulic lime (shipped from France). The blocks were made on the spot, in suitable moulds. When dried and hardened, they were precipitated into the sea by means of waggons and tramways, and there left to adjust themselves without much aid from regular masonry. The area enclosed between the two moles is about 500 acres, and is dredged deep enough for merchant-ships of considerable size, though only the central portion would suffice for large ocean-going steamers. Landward of the harbour is an inner basin or port, 870 yards by 500, with a depth shelving from 26 to 14 feet. The entrance from the harbour to the basins, docks, and canal, with the accompanying quays, wharves, &c., are adequate to the accommodation of a very large trade—which, of course, the company wish and hope to obtain. What are the arguments, *pro* and *con*, relating to the probability that the newly-formed harbour will gradually become choked up with mud, we shall notice in a later paragraph.

Lake Menzaleh.—The canal passes for several miles through Lake Menzaleh—once part of the Gulf of Pelusium, and through which the Pelusiac branch of the Nile in ancient times entered the Mediterranean. It has in modern days become a strange region of shallow water, swamps, and detached bits of dry land. When the Nile is full the lake rises, and covers a wide area of otherwise dry land; the level becomes higher than that of the Mediterranean, and necessitates care in the embankment of the canal. The lake abounds with fish and wildfowl, the catching of which has hitherto formed the chief occupation of the Arabs hereabouts; but a new mode of life seems likely to open for them, by the influx of Europeans and European money into the district. Partly by dredging, partly by embanking, the canal has been carried in a straight line along or across the lake, near a swampy region on the east known as the Pelusian plain. The embankment is mostly about fifteen feet above the level of the lake—or rather morass, which is the more proper designation.

Kantara Cutting.—There is a land portion of three or four miles between Lake Menzaleh and Lake Ballah, having the village of Kantara nearly halfway. We call it a cutting, but it is little other than a sandy strip, slightly above the level of the two lakes, with sand-hills, 15 to 30 feet high, here and there. No difficulty has been experienced in this part of the work; whether sand will be blown into the canal in the course of years, remains to beseen. Kantara, now a town of 2000 inhabitants, was on the line of the ancient caravan route from Syria, Canaan, Palestine, &c. to Egypt, possibly as far back as the time of Abraham.

Lake Ballah.—The canal then passes for some eight miles or so through Lake Ballah, from the dry land at Kantara to that at El Ferdane. This lake is a kind of salt-marsh, midway between the summit-level and the bottom-level of the canal, and requiring, therefore, the twofold operations of embanking and dredging.

El Ferdane and El Guisr Cutting.—Now we come to more formidable works on the line. Between Lake Ballah and Lake Timsah there is about eight miles of dry land, and some of this is table-land, which required an enormous amount of excavation. At the northern end of this portion stands the town or village of El Ferdane. When Lord Clarence Paget, representing the British Admiralty in a semi-official way, visited the works of the canal in February, 1867, he steamed along the Egyptian coast from Alexandria to Port Saïd, and thence in a steam-barge up to El Ferdane, beyond which no further progress could be made by water. Four or five miles from this village is the highest part of the plateau, at El Guisr. Here the canal-diggers had to work in some parts to a depth of 90 feet, with a width of nearly 200 feet—showing how enormous must have been the quantity of material to reduce. The rock was sandstone, and blasting with gunpowder was adopted to expedite the process. It has been ascertained, since this cutting was finished, that 40,000 cubic yards of sand has been blown into it in the space of twelve months. Many engineers believe that it will be necessary to plant trees and shrubs on a wide belt of sandy margin, as a means of fixing and consolidating the sand; and, moreover, that constant dredging will be necessary in El Guisr cutting.

Lake Timsah.—This is much smaller than Lakes Menzaleh and Ballah, but more important, as being nearly midway between the two ends of the canal, and as being the point of junction with the Fresh-water Canal. Only two or three miles of the Maritime Canal traverse the lake (a dry basin for many ages), near its eastern margin. The line had not to be dredged very deeply, because the bed of the lake itself is at a low level. Of 50 miles of canal, from Port Saïd to the southern margin of Ballah, 37 have been formed by dredging lakes and swamps, and only 13 by cutting through plateaux and sand-strips. The lake now contains 80 million cubic yards of sea-water, let in (in 1866 and '67) from the Mediterranean as soon as the works were finished from Port Saïd to Ballah.

Ismailia.—Here we have an instance of a bran-new town, the direct growth of M. de Lesseps' project. It stands on the north bank of Lake Timsah, near both canals (the salt-water and the fresh). A small Arab village has become almost a city, named after the present Viceroy (Ismail Pacha), as Port Saïd had been after his predecessor (Saïd Pacha). It has a mingled population of many nations, but chiefly Arab and French. It boasts its villas for French and Egyptian officials, counting-houses and a bank for commercial business, two hotels, four or five cafés, a theatre, a Roman Catholic chapel, a Mohammedan mosque, a hospital, a telegraph office, an abattoir, a bazaar. It has its "Avenue Victoria," its "Avenue de l'Impératrice," and its open square called "Place Champollion;" and it has a dockyard for the repair of the smaller canal craft. Ismailia is a veritable triumph of art over nature, for there are gardens of beautiful flowers produced by the irrigation which the Fresh-water Canal has rendered possible, on spots where little but desolate sand was visible a few years ago; and Europeans can live in something like comfort, despite a temperature sometimes rising to 120° Fahr. in the shade.

A harbour and landing-quay will be formed on the north side of the lake between the Great Canal and Ismailia.

The Fresh-water Canal.—At the middle point in the length of the Great Maritime or Ship Canal there is, as we have said, a junction with the Sweet-water or Fresh-water Canal, without whose clear stream the works generally could not have been executed, seeing that the workmen would have had little or no water for drinking, cooking, or ablution. The Fresh-water Canal begins at Zagazic (the site of the ancient Bubastis), where it joins El Mashrafieh Canal, from near Cairo. It then follows the course of the ancient Canal of the Pharaohs to Tel-el-Kibeer, beyond which point it occupies a wholly new cutting. The general dimensions are about 40 feet wide by 9 feet deep, and the length is fifty miles—Ismailia being almost exactly equidistant from Suez, Port Saïd, and Zagazic. The last-named place is becoming a busy trading depôt, for it is connected both by rail and by canal with Cairo, while the sandy regions on both sides of the canal are becoming wonderfully fertilised by the fresh Nile water. Near Ismailia the canal bends sharply to the south, to convey the blessings of fresh water all the way to Suez; and here the engineers found a bit of the old Arab Canal, near Chalouf, in such good order, that they made it available for their purposes. No open fresh-water canal has been constructed from Ismailia northward to Port Saïd; the water being forced in that direction through large main pipes by steam-power, which insures a continuous supply of 50,000 to 100,000 cubic feet per day. There is also a junction of the Fresh-water Canal with the Great Canal at Ismailia; but as the two are on different levels, locks are necessary. The Fresh-water Canal is available for navigation as well as for drinking and irrigation, and has passenger stations at Mahsamah and Kamses, between Zagazic and Ismailia. When it was announced, in February, 1869, that small vessels could go from sea to sea across the Isthmus, the announcement was correct, but was to be understood in this sense—that the vessels went along the Great Ship Canal to Ismailia then ascended through the locks to the Fresh-water Canal, along which they continued the journey to Suez. Even if the gigantic Maritime Canal should prove eventually a commercial failure, the Pacha and M. de Lesseps will have conferred a lasting benefit on the whole region by the construction of that which the Arabs expressively designate the "Canal of Sweet Waters." The Pacha has purchased it from the company, and has arranged with a contractor, who charges a small sum for every cubic yard of water pumped along the main pipes by large steam-engines at Ismailia.

Serapeum Cutting.—We now resume the notice of the Great Canal at the point where it emerges from Lake Timsah. The land portion between this lake and the Bitter Lakes is about nine miles long, passing Toussoum and Serapeum on the way. During the first portion of this distance the depth of cutting is not very great, but near Serapeum the quantity of rock to be excavated has been enormous. The contractor, despairing of finishing his work in time by hand-labour, was much perplexed as to the best course to adopt. His eventual plan was a bold and ingenious one. He excavated to a

certain depth, and dammed up the excavation at the north and south ends; he brought a conduit from the Fresh-water Canal into it, and filled it with water; he floated round some of the enormous dredging-vessels from Lake Timsah, and then completed the full depth of excavation by dredging instead of digging. None of the salt-water from the Mediterranean reached so far south as Serapeum until the early part of 1869; it was dammed out at Toussoum until the Bitter Lakes (presently to be noticed) were ready to receive it. The opening of the sluices in this dam was the ceremony performed by the Prince and Princess of Wales in February last. The Royal party left Cairo on the 24th, went by rail to Suez, examined the works at that terminus on the 25th, and reached Toussoum by a curious succession of journeys by railway, barge, carriage, and saddle-horses. At a given instant workmen knocked away certain wedges, the sluices opened, and sea-water began to rush through. Whether the deep Serapeum cutting can be kept clear from the sand which is hereabouts so plentiful, is one among the many problems waiting for solution. It has been ascertained that 270,000 cubic yards of sand was blown into it in one year—nearly seven times as much as that which in an equal space of time had been blown into El Guisr cutting. If this inrush cannot be prevented by the consolidating influence of plants and shrubs on the banks, it bodes ill for the future welfare of the undertaking.

The Bitter Lakes.—This is in some respects the most remarkable portion of the route. It is a depression along which the canal runs in a serpentine course for about twenty-three miles. Once a lake of salt-water, it was dried up years ago, the evaporated water leaving behind it a thick layer or crust of bitter salt, from which the name is derived; indeed, the salt was in some places as much as three yards in thickness. The depression being far below the level of the surrounding land, the excavators had not to dig to much additional depth to form the canal. The water from the Mediterranean (admitted by the opening of the sluices at Toussoum and Serapeum) has been flowing into this depression from February 1869 to the time when these pages are being written (October, 1869). The area of the Bitter Lakes being 100,000 acres, the quantity of water needed is necessarily enormous: some engineers estimate it at nearly 3000 million cubic yards. When all the works are completed, sea-water will flow into the lake at both ends; but as the Red Sea is so much nearer than the Mediterranean, many engineers expect that there will be a current from south to north through the Bitter Lakes. The evaporation in that sultry climate is so exceedingly great, that (it is estimated) nearly 10,000,000 cubic yards of water will be carried up into the atmosphere from this wide-spreading surface in the hottest of summer days: the two seas must supply this deficiency; and it will be a curious problem to solve, how far this action and reaction will produce permanent currents in the canal, and what effect such currents will have on the sloping banks.

Chalouf Cutting.—A length of about seventeen miles, partly through a shallow lake, but chiefly through dry land, carries the canal from the southern end of the Bitter Lakes to Suez. The deepest portion of this cutting is at Chalouf. The rock is so hard that it could not

be softened and dredged as at Serapeum; and consequently vast numbers of labourers have had to be employed, aided by blasting, steam-power, and other agencies.

Suez.—At last we come to the southern end of the Great Canal, where it joins its waters with those of the Red Sea. A town has for unknown centuries existed at this extreme northern end of the far-famed sea connected with the exodus of the Israelites from Egypt; but it is only since the establishment of the Overland route to India that Suez has boasted of a considerable population. As no large ships could be repaired nearer than Bombay, the late Pacha built a fine new dry-dock, which was opened with great ceremony in December, 1866. It is 413 feet long, 95 feet broad, and has 24 feet depth of water, even at low-tide; it can be filled in twohours and a quarter, and emptied in six hours. The dock is at the end of a spit, which stretches out three miles beyond Suez. Besides this dock, Suez can boast of a mole 850 yards long; a space of 50 acres for docks and quays, reclaimed from useless muddy shore; two piers within the harbour, connected with the railways which run to Ismailia, Cairo, and Alexandria; a dry-dock, 360 feet by 85, to repair the mail-steamers belonging to the Peninsular and Oriental Company—and various other concomitants of a busy commercial port and harbour. All this would have been literally impossible had not the invaluable Nile water been brought thither by the Fresh-water Canal; for there is no river, the wells give a very inadequate supply, and nothing beyond a small population could have lived with so scanty a supply of fresh water.

Whether the closing weeks of the year 1869 are to see all these grand works really finished, and Africa converted into a huge island, between which and Asia merchant-ships and India-mails will career along—time will show. But it is here necessary to correct many and serious mistakes into which English readers have from time to time been led—partly by their non-acquaintance with the relation between three distinct canals, and partly by the grandiloquent language used by the agents of the company. In December, 1863, a telegram announced the finishing of a fresh-water channel from sea to sea; but this only meant that the iron pipes had been all laid from Port Saïd to Ismailia, where they connected with the Fresh-water Canal running thence to Suez. In the same year there was an announcement to the effect that salt-water had reached Timsah from Port Saïd; but this was only the finishing of the Service Canal—the Great Canal itself had hardly been begun at that time. In August, 1865, the newspaper readers of Europe were surprised by a sonorous announcement from Egypt that "the floodgates of the Suez Canal have been thrown open;" but the fact was simply that a flat-bottomed barge had gone from Port Saïd to Suez along the Service Canal and the Fresh-water Canal. In December of the same year many persons were led to the erroneous belief that trade had actually commenced on the Great Canal; whereas the truth was that a steamer, drawing thirteen feet of water, had simply entered the basin at Port Saïd. In May, 1866, the company announced their readiness to carry goods the whole length from the Mediterranean to the Red Sea, at 35 francs per ton; but this was through the Service and the Fresh-water

Canals, by small steamers. By the end of 1867, the piers at Port Saïd were considerably advanced, although the scooping-out of the enclosed harbour had scarcely commenced; the heavy works from Port Saïd to Ismailia were progressing; but from Ismailia to Suez more remained to be done than had actually been completed. By the end of 1868 the commercial traffic had so far advanced that many stores were transported by the company from the Mediterranean to the Red Sea for the British Government, to be forwarded by ship to Abyssinia; and this again led many English readers to believe that the Great Canal was finished and opened; whereas the simple fact was that lighters and steam-tugs conveyed the stores along the two subsidiary canals. Soon after this we were told that "a French man-of-war had passed through the canal." This resolved itself into a laborious voyage made by the small French sloop *Levrette*, partly on the Great Canal, and partly (supported on barrels and caissons) along the southern half of the Fresh-water Canal.

Will the Suez Canal—the great maritime ship-canal—stand the test of tides, currents, and sand-storms? If it does, will it pay commercially? These two questions keenly affect not only the company, but the Egyptian ruler; seeing that Saïd Pacha was deeply interested in it from 1854 to 1863, and Ismail Pacha still more deeply from 1863 to 1869—interested nationally, politically, and financially.

In the first place, it will have to be decided what kind of traction-power can best be used on the canal, in regard to the security both of the vessels and of the banks. There was an opinion entertained at one time that certain advantages would accrue from the use of a chain laid along the bottom of the canal, similar to those which are used for the ferry-steamers at Portsmouth, Plymouth, and other harbours. In this arrangement, cogs on the circumference of revolving wheels, belonging to the steamer and worked by the steam-engines, catch in the links of the chain; and the vessel is forced along by this means. But this idea has been abandoned. It is intended that screw-steamers shall use their own propelling power, while sailing-vessels will be drawn along by steam-tugs. Paddlewheels are not to be used; they occupy too much width, and occasion more swell than screw-steamers. If the traffic should ever become large, difficulties might arise in connection with the passing of two ships. Wide as the canal is, it could not afford safe passage for two ships of great magnitude without some danger of contact. In this case it is expected that stopping-places, besides Lake Timsah and the Bitter Lakes, will have to be established, like the shunting-sidings on a single line of railway. A widening of the canal at some places would be costly work; and it is not intended to commit the company to such a liability unless (and until) the trade has become profitably large. The engineers believe that the east and west winds on the Isthmus will not be sufficiently strong to blow vessels towards the sides of the canal; else rather awkward results might follow. A system of electric lighting is to be tried, to guide vessels at night through the two lakes.

As to the kind of traffic which may be expected on the canal, an impartial but experienced observer may possibly be a better guide than any one officially connected with the company. We will, there-

fore, transcribe a few observations made on this point by Mr. Fowler, the eminent civil engineer, in a letter to *The Times*—arising out of a visit which he made to the works in company with the Prince and Princess of Wales :—"The Suez Canal is so peculiar in itself, and in the manner in which localities are affected by it, with respect to their maritime distances from each other, that it is almost impossible to foresee the manner and degree in which it will attract traffic to itself. It may, however, be assumed with tolerable safety that, provided the canal be maintained in full depth and efficiency, and the charges made for its use are not unreasonable, the steam passenger and mail traffic now carried on between Europe and India will chiefly pass through the canal. It may with equal safety be assumed that sailing-vessels, which would require steam-tugs, not only through the canal, but also down the Red Sea, will *not* use the canal. A certain amount of local traffic between the Mediterranean and Red Sea ports will, no doubt, use the canal. The great element of uncertainty, and one on which the commercial success of the Suez Canal will chiefly depend, is whether new sailing-vessels, with adequate auxiliary steam-power specially adapted to the canal and the Red Sea, will be constructed so as to divert the large traffic now being carried round the Cape. I think enterprising firms will try this experiment; and if successful, the Suez Canal will secure a great position both for usefulness and profit." The Company have fixed provisionally on a tariff of 10 francs per passenger, and 10 francs per ton measurement; but this is a matter subject to future adjustment. Every vessel will have to take a certificated pilot, acquainted with the peculiarities of the navigation.

It will here be seen that Mr. Fowler's anticipation of a large mail and passenger traffic depends on the fulfilment of the important proviso that "the canal be maintained in full depth and efficiency." This at once opens several important matters of inquiry. Four possible sources of embarrassment have been pointed out, which may conveniently be noted separately :—

(1.) *Port Saïd may be choked up by a deposit of Nile mud.*—Every one allows that vast quantities of fine mud, carried down by the Nile to the Mediterranean, are thence borne along eastward by prevailing winds and currents; and it is equally admitted, that long piers jutting out in the way of these forces will cause much of this mud to deposit immediately westward of the piers. The question is—how much? Already a new shore is being formed, and some apprehension exists that it may in time encroach upon the mouth of the canal, between the two piers. Mr. Fowler, after a careful examination, however, finds that the deposit is likely to lessen in rapidity, and that many years must elapse before it will seriously obstruct the mouth of the canal. Meanwhile there will be a necessity for frequent dredging. It has been found that in addition to the accumulation of mud outside, or on the western flank of the westernmost pier, large quantities have found their way through the interstices of the artificial blocks of which it is composed, and have entered the harbour. Mr. Fowler anticipates the eventual possibility, if not probability, of the engineers finding it necessary both to lengthen

the western pier and to fill up the interstices between the blocks—works of some difficulty and of considerable cost.

(2.) *The Canal may be choked up by sand, blown into it from the Desert.*—This matter has already been adverted to. It is admitted that, if the whole length of the canal passed through sandy desert, the choking-up would be almost a certainty; but, fortunately, the only seriously threatened portions are immediately north and south of Lake Timsah, at the deep cuttings of El Guisr and Serapeum. Here the sand blown in during twelve months has been found to exceed 300,000 cubic yards (40,000 at El Guisr and 270,000 at Serapeum)—an enormous quantity, certainly. The company look forward to two modes of lessening this accumulation in future—viz., by planting to a considerable distance from the margin of the canal, in order to convert this part of the sandy desert into a kind of fixed vegetable soil; and by applying some of the water of the Fresh-water Canal to irrigation, thereby converting a still wider belt into an oasis or green "wady." Nevertheless, it is conceived to be probable that the constant use of one or two powerful dredging-machines in Lake Timsah will be necessary to encounter this double attack from the two sand-encumbered cuttings.

(3.) *The sloping banks may be injured by the wave caused by passing vessels.*—That they will be injured, so long as the slopes are merely earthen, or of loose sandstone, is admitted by most engineers conversant with canal navigation; the water scrapes and wastes away the material, imperceptibly in regard to each individual wave, but seriously perceptible after a time. The authority whom we have quoted, says:—"I believe it will be found necessary to make a proper and immediate protection of the slopes by stone-pitching, above and below the surface of the water, along the whole length of the canal—if the traffic is to be conducted at a reasonable rate of speed." Whether this ought to be done before or after the final opening of the canal for traffic is a question on which opinions have differed. If after, the required supply of stone can be carried direct to every part where it is wanted along the canal itself; whereas if done before the establishment of regular traffic, much costly and tedious land-transit would be needed. On the other hand, the stone-pitching could be effected more easily while the canal is comparatively empty, than when full of water; and, moreover, any delay in attending to this important protective measure may allow the damaging influence of erosion to commence.

(4.) *The water in the Canal may be carried off too rapidly by evaporation.*—This apprehension relates chiefly to the wide-spreading Bitter Lakes, which, as we have said, present something like 100,000 acres of surface to the desiccating influence of that sun-burnt region. The millions of cubic yards of water that will be evaporated every day can only be supplied from the Red Sea and the Mediterranean—on the one hand through the Chalouf cutting, on the other through the El Guisr and Serapeum cuttings. It remains to be seen, by experience, whether this supply to remedy an incessant waste will be maintained in a regular way without injuring the canal or retarding the traffic. The Red Sea being so much nearer than the

Mediterranean to the Bitter Lakes, it is expected that the current of supply will be stronger from the south than from the north. Moreover, the range of tide, or the difference of height between high-water and low-water, is greater in the Red Sea than the Mediterranean—although the mean levels are nearly equal. From these two causes combined, it is deemed probable that navigation will be slightly retarded in going southward from the Bitter Lakes to Suez, and equally accelerated in going northward from Suez to the Bitter Lakes. The advantage may, perhaps, balance the disadvantage; but it will render essentially necessary the prompt lining with stone of the portion of canal exposed to this current; and some engineers are of opinion that, if the funds at the command of the company had permitted, it would have been well to make the Chalouf cutting (the heaviest work between the lake and the Red Sea) of additional width.

Postscript.—November 4, 1869.—Down to this date, all the arrangements have progressed favourably towards the opening of the Suez Canal in the third week of the present month. The dams having been one by one removed, salt-water has been flowing in from both ends—from the Mediterranean in the first instance, and then from the Red Sea. The supply was needed, not only to fill the whole length of the canal to the full depth, but also to fill two of the dried-up depressions, especially the large area of the Bitter Lakes; and this flowing-in appears to have been nearly completed. (The map [p. 104] accompanying this article will show that the Bitter Lakes are much nearer to Suez than to Port Saïd: this proximity has led to the filling-in from the Red Sea rather than from the Mediterranean; whereas Lake Ballah was supplied from the reverse direction). All the unsolved problems touching the permanent efficiency of the canal remain as they were; we need therefore not revert to them—except to state that there are two or three rather sharp bends in the channel, which some engineers believe will have to be rounded off. An experienced officer, sent out by the Peninsular and Oriental Steam Navigation Company, has carefully examined the whole canal from end to end, in relation to its capabilities for navigation. His report was favourable; at no part was the depth of water less than 20 feet, and measures were rapidly in progress for removing all obstructions to the due removal of soil and influx of water. Various steam-navigation companies on the Continent are preparing to avail themselves of this new channel of communication with India and the East—French, from Marseilles; Italian, from Brindisi or some other port; Austrian, from Trieste; and Russian, from Odessa. Attention has been especially drawn to the last-named feature. Hitherto, Russia has had scarcely any intercourse with the East, except overland, through Siberia or Turkestan; but if steamers should hereafter go from the Black Sea ports direct to Persian or Indian ports, the results might be important, both politically and commercially.

GEORGE DODD.

ARCHITECTURE AND PUBLIC IMPROVEMENTS.

1. General Progress:—Art and Public Monuments.

In former years we have had to speak of alternate victories and defeats in "The Battle of the Styles." But after the long struggle there has ensued a calm. Whether from weariness or exhaustion, or by common consent, Italians, Greeks, and Goths have separated, resting, for awhile at least, in a sort of armed peace, watching each other's movements. Hardly, however, had that strife ceased when a new wave of discord swept across the architectural world; the auxiliaries in this war being not ecclesiastics but lawyers, and the general public being more directly appealed to by the opposite factions. "The Battle of the Sites," though narrower in purpose and more confined in its locality, and though it may end sooner, and the victory be more decided, will have been no less vigorously conducted, and hardly be less famous, than the Battle of the Styles.

"Mankind," wrote Arbuthnot to Swift, "has an inexhaustible source of invention in the way of folly and madness." We may hope he was mistaken, but certainly the lapse of a century and a half has done little towards its exhaustion—as this affair of the Law Courts testifies. Whilst we were bemoaning the misery caused by the immoderate destruction of houses by railways in and around London, and the mischievous overcrowding which followed in the poorer localities, a clearance was unceremoniously made in the very heart of the metropolis, over an area equal in extent and population to a moderate-sized town—thousands of inhabitants being driven out to seek new homes, and just upon a million of money spent in the process: then, *after* the ground was reduced to a bare waste, it was suddenly discovered that all this had been done unnecessarily; that the site was unsuitable; that to make it suitable almost as much more land must be taken, and almost as many more dwellings swept away; that, in short, the best thing to do would be to give up the site altogether, and repeat the process in another place. Now, surely, there must be something wrong in all this. The new site may be the better of the two, the new arrangements superior to the old; but to the ordinary apprehension, it does seem that there must have been a marvellous absence of prevision somewhere, in suffering matters to proceed so far, wasting so much money, and ousting so large a population, before making the discovery—that, in a word, there has here been something very decided "in the way of folly and madness."

One most important lesson the change of site or plan may, however, help to impress on those who are entrusted with the preparation of schemes for national works—the necessity for dealing frankly and fairly with the public. The original estimate, and that on which the scheme for the Law Courts was sanctioned, was that the entire

cost should be a million and a half; already, in merely clearing the site, nearly a million has been expended; and the total cost, the Chancellor of the Exchequer stated officially, would not be less than four millions. Of course no one has been to blame; the scheme expanded quite naturally as it came to be worked out, and in all probability, if not checked when it was, would soon have developed into still more magnificent proportions. We, for our part, cannot but commend the Chancellor's interference. It is well that, however unpleasant or inconvenient to those engaged in the work, such a course of procedure should be peremptorily stopped, and that it should once for all be understood, that the preliminary estimate must be made with due deliberation and clear conviction, and the work itself be carried out, conformably with it, in scrupulous good faith. The public have been treated with far too little ceremony in these matters. The history of our recent public works presents too many instances of original estimates being intended merely to mislead, or being afterwards treated as though they were so intended. For the honour of our architects and public men, it is time the system came to an end. Reckless estimating and reckless dealing with estimates may well be left to railway officials.

Another and more immediate public gain from the change of plan may be the abandonment or thorough reconsideration of the accepted design. Whilst, from his own point of view, Mr. Street's exterior was admirable in parts and details, as a whole it was mean, and poor, and disappointing. But Mr. Street is an excellent architect, and we cannot but think that the fuller consideration which the delay has allowed, must have convinced him that for nineteenth-century Law Courts in the very centre of London, a mediæval, conventual, or ecclesiastical edifice is at least an anachronism, and that he will yet hit upon something more appropriate and nobler—worthier the age, the place, and his own fame. One part of his original design will assuredly not withstand the most summary reconsideration—or, if it do, the necessity for economising will, happily for the national credit, decide its fate; and Mr. Street may hold himself well repaid for the delay and trouble, in escaping from having his name for ever linked with what would have been perhaps the biggest, but beyond dispute the ugliest, tower in existence.

What will be the ultimate decision as to the site is at present a matter of speculation, and must, we suppose, remain so till next session. Committees and the Ministry are divided in opinion. The last Committee appointed by the House of Commons reported in favour of the Carey-street site, but only by a narrow majority; and the Chancellor of the Exchequer not only remained unconvinced, but drew up an elaborate and effective draft report in favour of the Howard-street site. We must now wait, as patiently as we may, the meeting of the rival forces next spring at Westminster. Then we may expect the campaign to prove as short and conclusive as Sadowa. But, whichever site be adopted, the building will be erected, not on the portentous scale to which it had attained in the almost Oriental visions of the Legal Commissioners, but on the reduced scale contemplated by the Government plan for the site by the Thames. This, at

ARCHITECTURE AND PUBLIC IMPROVEMENTS.

1. General Progress:—Art and Public Monuments.

In former years we have had to speak of alternate victories and defeats in "The Battle of the Styles." But after the long struggle there has ensued a calm. Whether from weariness or exhaustion, or by common consent, Italians, Greeks, and Goths have separated, resting, for awhile at least, in a sort of armed peace, watching each other's movements. Hardly, however, had that strife ceased when a new wave of discord swept across the architectural world; the auxiliaries in this war being not ecclesiastics but lawyers, and the general public being more directly appealed to by the opposite factions. "The Battle of the Sites," though narrower in purpose and more confined in its locality, and though it may end sooner, and the victory be more decided, will have been no less vigorously conducted, and hardly be less famous, than the Battle of the Styles.

"Mankind," wrote Arbuthnot to Swift, "has an inexhaustible source of invention in the way of folly and madness." We may hope he was mistaken, but certainly the lapse of a century and a half has done little towards its exhaustion—as this affair of the Law Courts testifies. Whilst we were bemoaning the misery caused by the immoderate destruction of houses by railways in and around London, and the mischievous overcrowding which followed in the poorer localities, a clearance was unceremoniously made in the very heart of the metropolis, over an area equal in extent and population to a moderate-sized town—thousands of inhabitants being driven out to seek new homes, and just upon a million of money spent in the process: then, *after* the ground was reduced to a bare waste, it was suddenly discovered that all this had been done unnecessarily; that the site was unsuitable; that to make it suitable almost as much more land must be taken, and almost as many more dwellings swept away; that, in short, the best thing to do would be to give up the site altogether, and repeat the process in another place. Now, surely, there must be something wrong in all this. The new site may be the better of the two, the new arrangements superior to the old; but to the ordinary apprehension, it does seem that there must have been a marvellous absence of prevision somewhere, in suffering matters to proceed so far, wasting so much money, and ousting so large a population, before making the discovery—that, in a word, there has here been something very decided "in the way of folly and madness."

One most important lesson the change of site or plan may, however, help to impress on those who are entrusted with the preparation of schemes for national works—the necessity for dealing frankly and fairly with the public. The original estimate, and that on which the scheme for the Law Courts was sanctioned, was that the entire

cost should be a million and a half; already, in merely clearing the site, nearly a million has been expended; and the total cost, the Chancellor of the Exchequer stated officially, would not be less than four millions. Of course no one has been to blame; the scheme expanded quite naturally as it came to be worked out, and in all probability, if not checked when it was, would soon have developed into still more magnificent proportions. We, for our part, cannot but commend the Chancellor's interference. It is well that, however unpleasant or inconvenient to those engaged in the work, such a course of procedure should be peremptorily stopped, and that it should once for all be understood, that the preliminary estimate must be made with due deliberation and clear conviction, and the work itself be carried out, conformably with it, in scrupulous good faith. The public have been treated with far too little ceremony in these matters. The history of our recent public works presents too many instances of original estimates being intended merely to mislead, or being afterwards treated as though they were so intended. For the honour of our architects and public men, it is time the system came to an end. Reckless estimating and reckless dealing with estimates may well be left to railway officials.

Another and more immediate public gain from the change of plan may be the abandonment or thorough reconsideration of the accepted design. Whilst, from his own point of view, Mr. Street's exterior was admirable in parts and details, as a whole it was mean, and poor, and disappointing. But Mr. Street is an excellent architect, and we cannot but think that the fuller consideration which the delay has allowed, must have convinced him that for nineteenth-century Law Courts in the very centre of London, a mediæval, conventual, or ecclesiastical edifice is at least an anachronism, and that he will yet hit upon something more appropriate and nobler—worthier the age, the place, and his own fame. One part of his original design will assuredly not withstand the most summary reconsideration—or, if it do, the necessity for economising will, happily for the national credit, decide its fate; and Mr. Street may hold himself well repaid for the delay and trouble, in escaping from having his name for ever linked with what would have been perhaps the biggest, but beyond dispute the ugliest, tower in existence.

What will be the ultimate decision as to the site is at present a matter of speculation, and must, we suppose, remain so till next session. Committees and the Ministry are divided in opinion. The last Committee appointed by the House of Commons reported in favour of the Carey-street site, but only by a narrow majority; and the Chancellor of the Exchequer not only remained unconvinced, but drew up an elaborate and effective draft report in favour of the Howard-street site. We must now wait, as patiently as we may, the meeting of the rival forces next spring at Westminster. Then we may expect the campaign to prove as short and conclusive as Sadowa. But, whichever site be adopted, the building will be erected, not on the portentous scale to which it had attained in the almost Oriental visions of the Legal Commissioners, but on the reduced scale contemplated by the Government plan for the site by the Thames. This, at

any rate, will save us the expenditure of a million or two of the public money, and the presence of an immense amount of absurdity.

But whilst the Law Courts are for the present in abeyance, other national buildings are being prosecuted with more or less vigour. The important political discussions carried on during the past session, in the two Houses of Parliament, probably interfered with the material alterations proposed in the houses themselves; but some of the minor inconveniences have been removed, or are in course of removal, and further progress has been made with the decorations. The Royal Gallery, the gallery in which are Maclise's noble pictures of 'Waterloo' and 'Trafalgar,' has received four of the statues of sovereigns that are intended to adorn it: they are of heroic size, and gilt, and are therefore rather to be regarded as decorative features than works of art, but they add considerably to the effect of the apartment. Dyce's frescoes in the Queen's Robing Room have been repaired by Mr. C. H. Cope, R.A., and some of the other frescoes have also undergone renovation. But the greatest change is being made in the Central Hall, which, though from the first intended to be the chief ornamental feature of the whole building, has hitherto been one of the most conspicuous failures. It is now proposed to improve the lighting; place in the panels some pictures designed by Mr. Moore and Mr. Poynter, and executed in mosaic by Salviati; and to decorate the groining of the hall in a similar manner. An obstinate but ineffectual opposition was raised to the proposal in the House of Commons, partly on the score of taste, but more on the question of form. We have no predilection for imitations of pictures in mosaic, greatly preferring to see the free work of the painter's own pencil, and believing that the true place for mosaic is in strictly decorative work; but if it be now really ascertained that neither fresco nor water-glass painting will stand the action of the sulphurous acid always present in the London atmosphere, we may be content to try the effect of mosaic, and no more fitting place could well be found than this in which to try it; nor could such an experiment be placed in better hands, or carried out more economically—due regard being had to efficiency.

The other leading works include the completion of the restoration of St. Stephen's Chapel, by the lavish decoration of the baptistery, which is now resplendent in marble, alabaster, coloured glass, and gilding. To the statues of the Sovereigns in Westminster Hall, there have been added Mary, the Queen of William III., by Mr. Noble, and Charles II. by Mr. Wickes; but, whatever may be their decorative value, they are in themselves little more than costume-pieces, and here seem out of place and keeping. The rearrangement of New Palace Yard has now been pretty well completed, by the erection of entrance-gates and railings—the former by Hardman, the latter by Skidmore—and both good examples of ironwork. Only the statues seem to be regarded as a failure, those which were temporarily fixed having been removed.

Respecting the Foreign Office and the India Office, we can add little to what was said in preceding years. Both buildings may now be regarded as finished, but for their complete architectural effect we

must await the erection of the Home and Colonial Offices, which, as will be remembered, will form the fourth side of the quadrangle. The foundations are laid of these offices, but Mr. Scott's designs for the superstructure having been revised by Mr. Layard after he became Commissioner of Works, new plans have had to be prepared, and the construction has necessarily been delayed. The large scheme described last year for the acquisition of land, and the erection of further buildings here, will not be as yet carried out in its integrity; but part of King-street, the eastern part of Great George-street, and Upper Charles-street have been acquired, and other portions are to be purchased. A piece of ground adjoining the Victoria Tower has also been obtained; but less timidity is desirable in the purchase of additional land, and the carrying-out of long-needed improvements.

The works at the Record Office, though little is said about them, are proceeding steadily, and the building is assuming a much more finished appearance. The later works have somewhat more of ornamentation, but the building is badly placed. Last session a vote of 30,000*l.* was taken for constructing the new wing.

The ground for the additional Post Office has been cleared, and it was suprising how much better the present Post Office looked when seen as a whole, from the back of the open space thus gained, before the hoarding was put up. It is understood that the Electric Telegraph business will be conducted in the new building, and that has necessitated some modifications of the plans, and consequent delay.

The removal of the Royal Academy has permitted the arrangement in the National Gallery of the principal national pictures, and of some improvement being made in the lighting of the great east room. This, however, is but a temporary measure, and the construction of a new gallery is only postponed. Mr. E. M. Barry, R.A., has been appointed architect of the new structure, and we may trust that the additional time granted will enable him to produce a satisfactory design. The rooms erected by the Royal Academy in the rear of Burlington House, from the designs of Mr. Sidney Smirke, R.A., met with general admiration at the May Exhibition: almost the only regret being that their insufficient space—for, though much larger than the old rooms, they are far too limited for the demands made upon them—prevented the exhibition of numerous excellent works, to the loss and disappointment of many deserving artists.

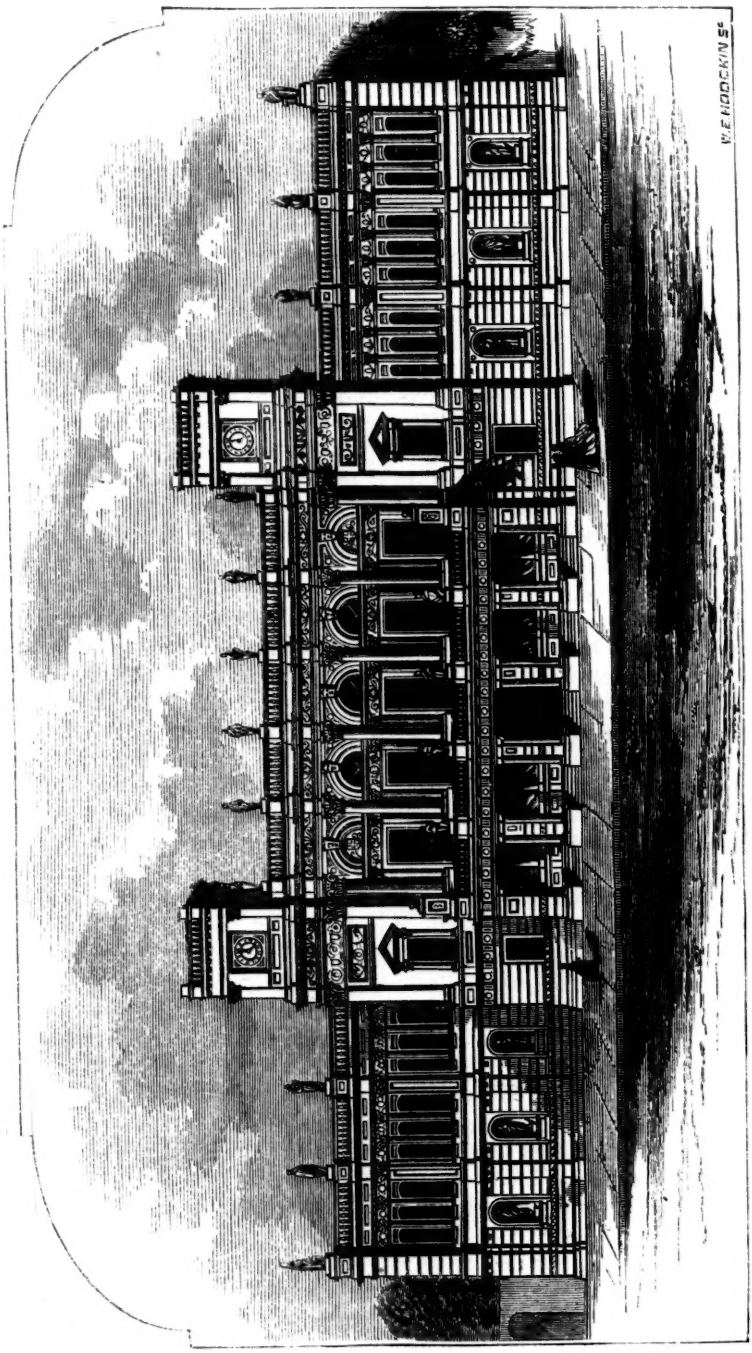
At the British Museum the Elgin Saloon is being extended, and other alterations made, with the view of providing accommodation for the Halicarnassian and other marbles, so long hidden away in the sheds under the portico. Many of these have already been placed, but ultimately there will probably be a considerable rearrangement of the sculpture in the Museum.

With the new Museum at South Kensington, which is to receive part at least of the Natural History collections now in the British Museum, little actual progress appears to have been made. The National Portrait Gallery, it seems, is also to be removed to this absorbing locality, the rooms in which the late Portrait Exhibitions were held being, it is said, appropriated to the purpose. Here likewise, it has been officially announced, a permanent building is about to be

erected, in which international exhibitions of works of industrial art and scientific inventions are to be held annually, commencing in 1871. The character of the building has not been stated, and we need not enquire: the time will come all too soon.

At the South Kensington Museum, large additions have been made. The enormous extent of the establishment is now fairly developing itself, though as yet both exterior and interior are rather chaotic and perplexing. Of the effect of the exterior it would certainly be premature to speak, but the unstinted use of terra-cotta ornament promises well. The equally free use of ceramic decoration in the interior has even more novelty, and is at least as effective in its way; but it is never satisfactory, and seldom safe, to speak of decorative work while in progress, and South Kensington can well afford to wait.

The building erected by the Government for the University of London approaches completion. The engraving (No. 1) will explain better than words the character of the principal façade, which fronts Burlington Gardens. As will be seen, it is Palladian of a very ornate character. The material is Portland stone, with columns, &c. of red Mansfield stone, and enriched string-courses of Hopton stone, which is believed to answer better than Portland for carved work. The statues are not merely decorative, but are intended to bear examination as works of art. They are impersonations of the university studies, and they are from the chisels of distinguished sculptors. The three standing figures on the roof line of the east wing (the left in the engraving) are Galileo, La Place, and Goethe, from the chisel of Mr. E. W. Wyon; the corresponding figures on the west wing are by Mr. M. Noble, and represent David Hume, John Hunter, and Sir Humphry Davy. The figures in the niches of the east wing, by Mr. P. McDowell, R.A., are Cuvier, Liebnitz, and Linnæus; those in the western niches, Locke, Bacon, and Adam Smith, are by Mr. W. Theed. The statues on the skyline of the central portion of the building are (commencing from the east or left end) Aristotle, Galen, and Cicero, by Mr. J. S. Westmacott; Justinian, Archimedes, and Plato, by Mr. W. F. Woodington. Finally, the four seated figures on the portico, of Harvey, Newton, Milton, and Bentham, are by Mr. J. Durham, A.R.A. This front is 240 feet long; and, now that it can be fairly seen, it will hardly fail to win general admiration for its classic stateliness and sober grace. The basement is massive and simple, but relieved from tameness or formality by the columnar treatment of the centre, and the niches and statues in the wings, while the broad blank wall-spaces give to it a very desirable air of solidity, and add greater importance to the first and what is at once seen to be the principal floor. Here, again, the eye is directly attracted to the centre, by its being not only advanced and raised, but more elaborately ornamented, at the same time that the ornament is sufficiently continued along the wings. Taken as a whole, and remembering that an adaptation of classical Italian was indispensable, we think Mr. Pennethorne may fairly be congratulated on having achieved a success. Thanks very much to the statues, the façade accords well with the purpose of the building; it is not merely imitative, but, as far as an adaptation of a given style can be, it may be termed original



No. 1.—London University.

in treatment, and it undoubtedly possesses that character of nobleness essential in such an edifice. The least satisfactory parts, as we expressed our fear last year would be the case, are the towers. From every point they look ill-proportioned in themselves, out-of-keeping with the contiguous parts, and detrimental to the skyline. The interior appears to be well arranged, and contains several fine rooms. The entrance-hall and grand staircase are well-proportioned, but they are not sufficiently advanced to judge of their effect. The principal examination-room in the west wing, and the hall for conferring degrees, &c., in the east wing, are noble apartments, each about 72 feet by 56; and there are two other examination and waiting halls, a laboratory and anatomical rooms, each about 62 feet by 32. The library is 34 feet by 33. The other rooms are such as are necessary for the working of the institution, and seem sufficient for their purpose.

We may turn now to our public monuments, over which, however, we need not this year linger long. The Prince Consort's Memorial, Hyde Park, is advancing; but of necessity, now that it is the sculpture and artistic work generally that is on hand, the progress is slow. It cannot, indeed, be otherwise without detriment. So that steady progress is made it should suffice. The core of the building,—the constructive work, and most of the surface decoration,—is finished. Above 1000 square feet of mosaics have been placed. The cross glitters in all the splendour of gold and enamel. The polished granite and coloured marble shafts and panels, and much of the iron scroll-work, are fixed. The chief thing wanting is the statuary, and with this good progress has been made. Next spring may, perchance, see it sufficiently completed in its main features to admit of its formal inauguration, though, looking at its present condition, we hardly anticipate so early a date. Last year we described its leading artistic features, as in previous years we had described its architectural character; we may leave any additional remarks till its completion, only adding, by way of correction, that we now understand that we had been misinformed as to the proportion of the cost of the memorial that will be defrayed by the Queen. The Royal Albert Hall of Arts and Sciences, on the opposite side of the road, appears to advance as slowly as the memorial. The outer walls have, however, been carried up to their full height, and the roof is being fixed; but the walls are bare outside, and all is confusion within. As its vast size as yet by no means makes itself felt by the spectator, it may be well to remind the reader that the building is an oval, 272 feet by 238, and that its height from the arena to the spring of the roof is 135 feet, to the top of the lantern about 150 feet. The span of the roof is about 219 feet by 185. It stands on an area of about an acre, is about one-fourth the size of the Coliseum at Rome, and is designed to accommodate 8000 persons. Its purpose has already been stated.

The Wellington Memorial has been waited for till the public has grown indifferent, and even in the House of Commons the annual vote now provokes but a languid discussion. The plaster model is, however, said to be positively approaching completion, and it is added that its beauty will take the public by surprise. It had need be very

beautiful to win back any amount of interest. An odd report has been circulating, that the removal of the Nelson Column from Trafalgar Square is under consideration. The Column was undoubtedly a blunder, architecturally, and it was an equal blunder, artistically, to perch the statue on the top of it. But it would be an even greater blunder to take it down in order to re-erect it elsewhere. Unless some clear gain is shown to be obtainable by its removal, it would be sheer folly to fling money away upon what must be a very unpopular act.

The new national memorials are no more fortunate than the old. The statue of Peel has been removed from New Palace Yard; that of Palmerston, which was tried this summer on two or three different spots about the Houses, was no more liked; and now the Government have on hand, or stowed away in lumber-vaults, not only the statues of these statesmen, but others of Stephenson, of Brunel, and it may be other worthies whom no one seems inclined to provide with a home. No doubt the Metropolitan Board of Works, which looks after everything, has an eye on them, and is preparing to carry them off to the Thames Embankment. With a view to the Embankment becoming the asylum for abandoned effigies, might it not, by the way, be as well to lay down a uniform scale for all future sculptural commissions, so that, when in line on the Embankment, our notable men may not form a regiment too palpably comparable with Falstaff's?

The only statue that has been erected in London this year, or the only one that has received the least attention, is that of Mr. George Peabody at the rear of the Royal Exchange. Mr. Peabody's munificent and well-directed liberality has been so exceptional in extent and character, that, though we are not wont to raise statues of living men in commemoration of their excellence, feeling that "the remembrance of a man's virtues is a better memorial than his figure in bronze or marble," yet the erection of this statue was universally regarded as only a befitting tribute of public gratitude and esteem. The statue is, no doubt, familiar to most of our readers—at least, by engravings or photographs. It is of bronze, modelled by Mr. Peabody's eminent countryman, Mr. W. W. Story, and cast at Munich. Mr. Peabody is represented seated, his legs crossed, his hands resting on his knees as though conversing familiarly. So thoroughly has it the air of truth and individuality, that it hardly needed the testimony of Mr. Motley, that when, in the sculptor's studio at Rome, he saw Mr. Peabody and his statue "seated side by side, he debated with himself, without coming to a satisfactory conclusion, which was the more like—the statue to Mr. Peabody, or Mr. Peabody to the statue?" Yet we are glad to have the assurance that the likeness is so faithful, and further glad to have Mr. Peabody's published approval of it; and if Mr. Story can scarcely be said to have solved the seemingly insoluble problem, how to adapt the peculiarities of actual costume to the requirements of sculpture, it may with safety be affirmed that he has produced a statue considerably above the level of recent works. The bright semi-golden colour of the bronze is not altogether agreeable, and tends rather to vulgarise the appearance of the statue; but it will tone down under the influence of the city atmo-

sphere, and may eventually prove preferable to the black hue which ordinary bronze so rapidly acquires in London, and which renders the features all but indistinguishable.

In the country several memorials have been inaugurated, the following being perhaps the most noteworthy:—At Southampton, a marble statue, by Mr. T. Sharp, of Lord Palmerston, eight feet high, on a pedestal nine feet high: the likeness is said to satisfy those who best knew the veteran statesman, but the statue does not certainly exceed average merit as a work of art. A marble statue of the Marquis of Westminster, by Mr. Thorneycroft, has been erected by subscription at Grosvenor Park, Chester. The memorial to Richard Oastler has been erected in the open space in front of the Midland Railway Station, Bradford. It is in the shape of a statue of the persevering advocate of the "Ten Hours' Bill," pleading the cause of the factory children, two of whom (a boy and a girl) are at his side: the sculptor was Mr. J. B. Philip. The wonderful popularity of the man was shown in the fact of a procession of, it is said, 100,000 persons, chiefly of the working-classes gathered from all the factory towns of the West Riding, having taken part in the inauguration. Statues in marble have been erected in St. George's Hall, Liverpool—of Lord Derby, in the habit of a Knight of the Garter, by Mr. Theed; and of Mr. Joseph Meyer, by Signor G. Fontana. It used to be understood that, except in the case of sovereigns, or warriors of an exceptional class like Wellington, public statues were monumental works, not to be decreed till the men were dead. Our fast age, not content to wait for that uncertain day, deifies its heroes while they are yet living. Liverpool seems to be going in strongly for the statues of its living idols. The practice will not tend to the elevation of art, nor to increase the respect with which public statues are regarded. It may, however, have the effect of securing better likenesses. The great northern cities like to overturn conventional maxims. Cromwell was forbidden a statue among the rulers in the Houses of Parliament: Manchester is about to give him one in her new Town Hall. An equestrian statue of the Queen has been completed by Mr. Thorneycroft; it is to be erected in front of St. George's Hall, Liverpool, about the end of the year.

A memorial, in the form of a clocktower, has been erected at Leicester to the four great benefactors of the old town:—Simon de Montfort, Earl of Leicester; William Wigton, founder of the hospital which bears his name; Gabriel Newton, founder of the green-coat school; and Sir Thomas White, whose loan-fund is very popular with Leicester tradesmen. The tower is square, Gothic, with a spire rising from the gabled clock-faces. At the angles above the door-arches are canopied statues of the four benefactors. It was designed by Mr. J. Goddard, of Leicester, and does credit to his taste. The memorial to the late Countess of Ellesmere, designed by Mr. T. G. Jackson, a Gothic cross fifty feet high on Walkden Moor, Manchester, has been formally inaugurated; as has the Yorkshire 'County Memorial' to George, seventh Earl of Carlisle—a Grecian column 120 feet high, erected on Bulmer Hill, near Castle Howard, and designed by Mr. F. P. Cockerell.

2. Public and Sanitary Works.

From the Loans Act, obtained last summer by the Metropolitan Board of Works, we learn that, notwithstanding its enormous revenue, the Board has, during the ten or twelve years of its active existence, incurred a debt of very nearly eight millions, and requires a further loan of two millions to meet its liabilities. This gives a tolerable notion of the magnitude of its operations for the improvement of the metropolis. Perhaps, next session, some member of the House of Commons will move for a distinct return of the total expenditure on the various works. That they have been on a magnificent scale, a glance along the Thames, and a slight effort of memory, will satisfy the most sceptical; but it is desirable to be able to see exactly what has been accomplished during these dozen years, and at what cost.

Their primary undertaking, the drainage of London, is virtually almost at a standstill, at least on the northern side of the Thames. The outer line, the high-level or intercepting sewer, has been for some time completed; but the low-level sewer, on which the successful working of the whole scheme depends, and without which the purification of the Thames is necessarily imperfect, remains practically without advance year after year. We know, of course, that its completion is dependent on that of the Thames Embankment, and that the completion of the embankment is hindered by the delay in constructing the Metropolitan District Railway, which has to be carried along it, and that the railway cannot be made till the shareholders furnish the money. Meanwhile the work drags wearily onward. Four millions have been spent on the sewers, another million on the embankment, and, for anything we can see, those who have provided these large sums may have to wait almost as long before they derive the full benefit from the works as they have already waited watching their tedious progress. No one is, of course, to blame, but it is a pity the stick cannot be applied somewhere. Parliament, which granted such extensive powers of hindrance as well as of execution, can surely enforce its own behests, and the public convenience should not be placed indefinitely at the mercy of any private company.

For the manner in which their works are executed, however, the Board merits almost unreserved commendation. Those portions of the main-drainage system which have been completed are in all respects admirable as examples of construction, and they carry out effectually the purpose for which they were designed. The Thames Embankment, alike on the south as on the north shore, is probably the finest piece of granite-work in London, and it may be expected to be as lasting as the best works of the old Roman engineers, with which it may, at the least, vie in magnitude and difficulty of execution. As a work of art, moreover, it contrasts favourably with most recent engineering efforts. In its general character and aspect it is marked by the largeness, simplicity, and dignity befitting a work of such magnitude. Its outline presents a broad and easy curve, following, of

course, the natural sweep of the river, but only broadly, and so as to preserve its own distinctive character. As you follow it along the river, the grand features of solidity and simplicity appear nowhere departed from. Beyond the massive bronze lions' heads, holding large mooring-rings, which are placed on the pedestals at intervals of sixty feet, the ornament is reserved for the landing-piers, and there, with the exception of the proposed sculptural groups, it is wholly constructional. The embankment itself affords a new and finer view of the river than has heretofore been obtainable, and will, we are inclined to believe, if fully opened before the inner margin is covered with buildings, reveal views of London of quite unanticipated picturesqueness. The third section, from the Temple to Blackfriars Bridge, is making steady progress; the railway loitered sadly all the past spring and summer, but the works, we are assured by the directors, are "now making rapid progress." Trees (oriental planes) have been planted along the footway of the embankment, at intervals of thirty feet.

The Southern Embankment was opened throughout for foot-passengers at the beginning of September, and is now practically completed as far as it is proposed to carry it for the present. It extends from Westminster Bridge to Vauxhall, a length of about 4300 feet. In general appearance and construction it is similar to the Northern Embankment, except that there are no recessed steamboat landing-piers, and that it is built on concrete faced with granite, whereas the foundations of that on the north of the river are of brick. At the Vauxhall end there are openings in the river-wall, to serve as entrances to private docks. The demolitions for the new buildings of St. Thomas's Hospital, which are advancing towards completion, have resulted in the formation of an improved thoroughfare, in continuation of Palace-road, from Westminster Bridge to Lambeth Palace, where it joins the carriage-way of the Southern Embankment to Vauxhall Bridge. Bishop's Walk, with its crowd of riverside rookeries, has been swept away, opening up a fine view of the archiepiscopal palace and grounds, which skirt the roadway of the new street.

The new street in continuation of the Northern Embankment, from Blackfriars Bridge to the Mansion House, after long delays, is so far completed as to be open for traffic between the Mansion House and Cannon-street; but the Blackfriars end is far from finished, and months will elapse before it can be opened throughout. It is a noble street, running in a nearly straight line between the points we have mentioned, a distance of two-thirds of a mile, with a uniform width of seventy feet, except the New Earl-street portion, which will be only fifty feet. When it shall be lined with stately offices and handsome shops—and a good beginning has been made in the Probate Office, and the large building designed by Mr. I'Anson for the British & Foreign Bible Society — it will form one of the finest thoroughfares in the city. At the east end the west front of the Royal Exchange is well displayed, and the Walbrook side of the Mansion House at present shows to great advantage. But it appears at least doubtful, the value of the ground being considered, whether the large space will be left open, though greatly desired by the

Board of Works. If it could be made available for the Mansion House Station of the Metropolitan District Railway, which the company is so anxious to possess, possibly it might be saved as an open space. The street has a capitally-planned subway for gas and water-pipes, like all the streets constructed by the Metropolitan Board, and as indeed, we are happy to say, will, by a recent Act, be in future imperative with all new roadways in the metropolis. The cost of Mansion House-street will be altogether very great. The claims for the property taken alone required nearly two millions for their settlement.

Before this new street can be formally opened, will take place the inauguration of a work almost rivalling it in cost, and far surpassing it in constructional magnitude and difficulty—the Holborn Viaduct. It might have been opened some months back, but, like the Thames Embankment, though not to so great an extent, its completion was retarded by the works of a private company, the roadway having to be broken up for the laying of the Pneumatic Despatch Company's huge tubes. The purpose of the viaduct, as the reader knows, is to bridge over the Fleet Valley, and spare men and horses the steep inclines of Holborn and Snow Hills. The viaduct, which reaches from Hatton Garden to Newgate-street, following nearly the line of Holborn Hill and Skinner-street, is about 1400 feet long, 80 feet wide (carriage-way 50 feet, footways 15 feet each), and nearly level throughout. Its construction is ingenious, but rather complicated. Except at Farringdon-street, which is crossed by a girder-bridge, the roadway is carried on a series of cross-arches, like those of ordinary railway viaducts, but double, or one above the other, where the valley is deepest; on each side of these arches is a lateral passage, 7 feet 9 inches wide, divided into a sewer in the lower part, a subway for gas and water-pipes in the upper, and a passage between; while outside these passages, and with them carrying the footways, are narrow cellular arches, rising in the highest part in three tiers, which are to serve as vaults to the houses lining the viaduct. This part of the work is of brick, and is of unusual thickness and strength. The cross-arches under the roadway have been so built as to be let for stores; and a tramway carried through them, with entrances under the bridges, affords easy means for the carriage of goods. The great ornamental feature of the viaduct is the bridge across Farringdon Street. Unfortunately for the effect, it is a skew-bridge—that is, it crosses the street obliquely; but the design is rich and striking. It is a cast-iron girder-bridge, in three spans, divided by the six granite piers which carry the girders. These piers are massive hexagonal shafts of polished red granite resting on bases of black granite, and having capitals of grey granite with bronze leaves; the outer piers being, however, carried above the palisade, and terminating as pedestals, on which are placed colossal bronze statues. The iron palisading consists of circular panels united by scrolls, and bearing emblazonings of civic crests and devices, with the City arms on a larger scale. At the four corners of the bridge, and forming an intrinsic part of the design, are lofty houses of ornate Renaissance character, within which are carried flights of steps, giving means of com-

munication to pedestrians between the two levels. Although still incomplete, this portion of the viaduct presents a novel and picturesque appearance, but its æsthetic merits must wait for judgment till the whole is finished. The enormous improvement which the viaduct will effect, and the skill shown in the arrangement of the approaches and subsidiary works, as well as in the viaduct itself, require, however, no waiting to ascertain. When completed, it will altogether change the character of this part of the City, and with the neighbouring railway-station and market, make this a new centre of commercial industry. Already, besides the bridge-houses just noticed, some large and costly business premises are being erected on the new lines of streets, and even the waste spaces along Farringdon-road seem likely to be built over. At the west end of the viaduct is a broad semicircular space, having St. Andrew's Church on its south side, called Holborn Circus, from which several new streets will diverge, the chief being Charterhouse-street, a fine broad thoroughfare leading by the New Meat Market. Newgate-street, at the eastern extremity, unfortunately affords no corresponding opening; but the City authorities are widening this street, as opportunity offers, to a uniform breadth of 50 feet. The area of old Newgate Market will be utilised, and probably a street be carried through it to the west end of St. Paul's Churchyard.

A far grander scheme, and one which would undoubtedly round off admirably the Holborn Valley Improvement, was however laid before the Corporation by Mr. William Haywood, the City Surveyor (and the Engineer of the viaduct), in his Report (dated July 13, 1869), as part of a comprehensive project of City improvements. Mr. Haywood's proposition is nothing less than that, to relieve the plethoric traffic of Newgate-street, Cheapside, and the Poultry, an entirely new street shall be formed, of the same width as the viaduct, and to commence at its eastern end (the Newgate end of Giltspur-street), pass along the back of Christ's Hospital (which, however, would have to be removed), a little north of the Post Office (taking the present Money Order Office) and Guildhall, the line of London Wall and Wormwood-street, and so on, in a practically straight line, to the new street forming by the Metropolitan Board of Works, as an extension westward of the Commercial Road. It is a bold, and would doubtless be a costly work; but whilst it would effectually continue the line of the Holborn Viaduct, and relieve the congested streets east of it, it would be much more than a mere City improvement. It would, in fact, with the Commercial Road extension, just referred to, open a broad but slightly curving and almost level thoroughfare, seven miles long, from Hyde Park Corner, through Oxford-street, to the East India Docks at Poplar. The new street, as laid down by Mr. Haywood, from the western end of Newgate-street to Commercial-street, Whitechapel, would be 2383 yards long and 80 feet wide. The other improvements include the widening of Fleet-street, the Old Bailey, St. Paul's Churchyard, the Poultry, Queen-street, and other narrow ways, and the construction of a new bridge over the Thames, near the Tower. Financial considerations, were none other to interfere, will probably prevent the carrying-out of the entire scheme within any reasonable

period; but the new street would so immensely improve the means of communication through London, and along the main line of traffic from east to west, that it ought to command serious consideration from the Corporation and the Legislature.

Other street improvements are in progress under the direction of the Metropolitan Board of Works. Those at Kensington and Whitechapel are important, and seem well-planned. The improvements on the Grosvenor estate, Pimlico, noticed last year, are making satisfactory progress. The two new metropolitan parks have at last been formally opened. Finsbury Park has an area of 115 acres; but of this twenty acres are reserved for building-sites, in order to recover a part of the cost, which has been very nearly 100,000*l*. Southwark Park has an area of sixty acres, of which sixteen acres are reserved for building on; its cost has been somewhat over 95,000*l*. At present, these parks are little more than blank open spaces, about which much-enduring visitors meander, confined by wire-fencing to ever-curving gravel-paths, contemplating the greenswards they are forbidden to tread. But new parks require to be looked at with the eye of faith. Like wines and virtues, they need age for ripening. Finsbury and Southwark are, as yet, but sorry representatives of metropolitan parks; but they will doubtless grow in beauty with the seasons. Their titles are their most permanent defects. They are hardly parks; had they been called pleasure or recreation grounds, they would have appeared admirable examples of their class. And their names are as great misnomers as their titles. Finsbury Park is at Hornsey—or between Hornsey and the Seven Sisters-road, Holloway,—and has the site of the once-noted Hornsey Wood House in its very midst; while miles of crowded streets, and hundreds of acres of still green meadows—Hoxton and Islington, and Highbury and Holloway—separate it from what has been known as Finsbury for at least 800 years. Southwark Park is at Rotherhithe, lying between Spa-road Station and the Lower-road, Deptford, and divided by the whole of Bermondsey from Southwark. It is an offence against topographical propriety, against the treasure of historical, social, and literary memories with which every inch of London and its suburbs is crowded, thus to transfer names from one part of the city to another, or to the suburbs—at the same time of necessity wiping out those which belong to the place itself. We are not, as a people, happy in the invention of new names, or the application of old ones; but no one would have believed beforehand, that any body of Londoners could have made so unintelligent a mal-appropriation of two of the oldest, best-known, and most clearly-defined names in London topography, and probably no other body but the Metropolitan Board of Works could have done so.

Stanley Park, Liverpool, is virtually completed; and the larger park, which Messrs. André and Hornblower are engaged in laying out, is making good progress: altogether, the Corporation of Liverpool will have expended about 1,000,000*l*. in forming the belt of parks which they are putting about the town. Albert Park, presented by Mr. H. W. F. Bolckow, M.P., to the thriving new town of Middlesborough, has been completed.

Railway extension proceeds more slowly than of old; but it proceeds, and application is every year made to Parliament for powers to construct new lines, though even where Acts are obtained the lines are in very many cases not constructed. Of the fifty-eight Railway Acts passed last session, many were for increase of powers, permission to abandon lines, extension of time, or the like. This being so, it would be idle to notice these new Acts in detail, and there is little in the lines recently opened that calls for notice. The weekly traffic returns show 13,564 miles of railway in operation in the United Kingdom, being an increase of 166 miles since the corresponding week of 1868; but returns are not obtained for the whole of the lines. The weekly receipts for traffic now average about 850,000*l*. None of the great companies have proceeded with their proposed extensions into the City, except in so far as they have availed themselves of the facilities offered by the Metropolitan Railway, the Moorgate-street terminus of which is now used by the Great Western, the Great Northern, and the Midland. The proceedings of the Metropolitan District Company have been noticed in connection with the Thames Embankment and the new street to the Mansion House. They have opened the line from Kensington to Westminster Bridge; but have decided not to continue it beyond Cannon-street, or the new street, if they can obtain permission to have their station there: the extension to Tower-street, in order to join the Metropolitan Extension line, may therefore be considered as definitively abandoned —unless Parliament compels them to proceed. The East London (or Thames Tunnel) Railway has hitherto made but slow progress, in consequence mainly of financial difficulties; but, according to the recent report of the directors, the southern section, from Wapping through the Tunnel, by Deptford, to the South London, North Kent, and London & Brighton Railways at New Cross and the Old Kent Road, is nearly ready for traffic. The section from Wapping to the terminus in Liverpool-street will, it is said, be completed in two years; but, considering the character of the works, this will require a more rapid rate of progress than any yet accomplished. The Thames Tunnel has been for some months closed to passengers. The Tower Subway—that remarkable scheme of Mr. P. Barlow, for making a passenger tunnel under the Thames from the Tower to Tooley Street, at a cost of only 16,000*l*.—approaches completion. Its entire length is to be 1320 feet; it is finished to within a few feet of the Surrey shaft, though, of course, there is much more to do before it can be opened for traffic. The subway is formed by cutting a tunnel through the clay beneath the stream, by means of a tubular wrought-iron shield, about eight feet in diameter, which is pushed forward by screw-jacks as the ground is cut away in front. The tunnel is then lined with a cellular tube of cast-iron, about seven feet internal diameter; the space between the clay and the outside of the tube being filled with blue lias cement in a liquid state, which, on setting, becomes impermeable by water, and will therefore, it is presumed, effectually preserve the tube from rust. The tubing is constructed of a series of rings, each eighteen inches wide, firmly bolted together. These rings

being cast in four segments (one of which serves as a keyplate), their erection *in situ* becomes, as will be seen, comparatively simple. A portion of the tunnel long enough to receive a ring having been excavated, the ring is set up in its place; another section of similar extent is excavated, and another ring fixed, by being strongly bolted to the preceding ring, and so on continuously. From the commencement of the works the tunnel has advanced, according to the statement of Mr. Barlow, the engineer, at an average rate of nine feet a day. The tunnel was begun from a vertical shaft on the Middlesex side, and, as we have said, has advanced to within a few feet of a corresponding shaft on the Surrey side, and it is considered that no further difficulties will have to be encountered. These vertical shafts will form the approaches to the tunnel, passengers being lowered or raised by hydraulic lifts. A single-line railway, two feet six inches wide, is laid through the tunnel, and the passage will be made in an omnibus propelled partly by a stationary engine, partly by gravity.

One of the most remarkable achievements in railway engineering in the country during the year is the Skelton Viaduct, which carries the Thorne and Doncaster line across the Ouse, here 800 feet wide. The bridge is of seven spans, the girders resting upon massive iron piers; but the river being navigable, and the railway level low, the centre had to be made moveable, in order to allow vessels to pass. This has been effected by making the moveable part of the bridge—a section not less than 232 feet long—turn, by means of hydraulic power, upon an enormous central pier. The magnificent bridge of the London and North-Western Line, across the Mersey at Runcorn, noticed last year, has also been opened for traffic; and the great railway extensions about Liverpool, with the vast new stations there and at Leeds, are making rapid progress.

Although an important public improvement, it hardly falls within our province to notice the transfer of the Electric Telegraphs of the United Kingdom from private companies to the Postmaster-General. By the Telegraph Act of 1869 the Treasury is empowered to raise 7,000,000*l.* for the purchase and working of the lines; the Postmaster-General is required to make one uniform charge for the transmission of telegraphic messages throughout the United Kingdom; and such messages are to be regarded as letters, which the Postmaster-General is to have the exclusive privilege of conveying. The headquarters of the telegraph system will be the New Post Office about to be erected on the west side of St. Martin's-le-Grand, directly opposite the present Post Office.

The question of the Water Supply of London and other great towns is this year treated in a distinct article, in connection with the important Report of the Royal Commissioners, and here, therefore, need not be further referred to. After the seemingly entire success of the experiments made at the Barking farm, it is a matter of wonder, as well as of serious regret, that the company formed for the reclamation of the Maplin Sands by means of the Thames sewage have not been able to continue their works. The Thames must, therefore, continue to be the receptacle of what would be most valu-

able if applied to the soil, but is worse than wasted, becoming the source of much mischief, when poured into the river. The recent Act for preventing the pollution of inland streams by the influx of town sewage is producing important results, and we may hope that the difficult question of the removal and utilisation of sewage is in a fair way of solution.

The whole subject, indeed, of the necessity of removing from crowded towns whatever is inimical to the general health, or dangerous to life and property, is coming to be clearly recognised. Among the least defensible of the nuisances tolerated in the very midst of the metropolis, have long been the gasworks, centres of annoyance, danger, and sickness. Two of the largest of these have, however, voluntarily decided on removing outside London whilst suitable unoccupied sites are still obtainable. The Chartered Gas Company, having secured an area of 750 acres, have constructed works on an enormous scale by the Thames, not far from the northern sewers' outfall. The works will combine the latest results of scientific investigation and mechanical improvements, whilst the exterior will exhibit some architectural character. Besides the vast retort-houses (of which there will be four, each 300 feet by 90), purifying-houses, gasholders, and the other appliances usual in gasworks, it has been necessary to construct an extensive river-wall, wharves, a massive iron pier, a railway, a private road three miles long, workmen's cottages, canteen, &c.—the cost of the whole being upwards of 700,000*l*. The site, a dreary spot in the Barking Marshes, has been converted by the works into a busy little colony. The Imperial Gas Company are erecting their extensive works at West Ham, about three miles east of Barking.

The drinking-fountain movement, as it is called, flows on. Fountains both for man and beast increase steadily in the metropolis, and may now be met with pretty generally in country towns. The Metropolitan Association, in their last report, state that during the year, ending July, 1869, they had erected 9 new fountains and 30 new troughs, and that at the present time they have "under their care" 123 fountains and 125 troughs. A few more drinking-fountains are much wanted in our parks and places of public resort. In the Regent's Park, one of more than commonly pretentious design was set up last summer, at the cost of a Bombay Parsee, Cowasjee Jehangeer Readymoney, who—his purse happily corresponding with his name—decided to erect a fountain in London (he had already erected several in Bombay), in recognition of "the protection enjoyed by him and his Parsee fellow-countrymen under British rule in India." The structure is of granite and marble, a sort of square cross in four stages, in all 26 feet high, having on the four faces medallions of the Queen, the Prince Consort, and Mr. Readymoney—a clock, emblematical carvings, &c. It cost about 1200*l*., and was designed by Mr. R. Keirle. It stands at the northern end of the Broad Walk, near the entrance to the Zoological Gardens, where was previously the elegant fountain designed by Mr. R. Westmacott, R.A., and which is to be re-erected, we understand, in the garden at the east end of the park —perhaps a more suitable locality.

Another block of Industrial Dwellings, appropriately named Peabody Square, has been erected in Victoria Street, Westminster, from the fund supplied by the late Mr. Peabody. In its general features it resembles the previous blocks, but embodies various improvements suggested by experience. In the four blocks occupied there is now a total population of about 2000, consisting in large part of labourers. "The sanitary condition of the buildings," says the last report of the trustees, "shows an entire exemption from endemic diseases, and from those complaints incident to low and crowded localities. Good ventilation and cleanliness are characteristic of the dwellings. An unlimited supply of water, and bath-rooms free to every tenant, together with enclosed playgrounds for the children, have already produced a salutary effect," alike upon old and young. The arrangements and organisation are at the same time studiously planned to suit the convenience of the occupants, who come and go at all hours, and "are as fully masters of their houses as if dwelling in any other building in the adjacent streets."

The Improved Industrial Dwellings Society, established for a like benevolent purpose, have now a working capital of 100,000*l*., with borrowing powers to an equal extent. They have several blocks of extensive buildings at Wapping, Southwark, Bethnal Green, King's Cross, St. Pancras Road, Finsbury, Greenwich, and elsewhere, in which about 4000 persons are comfortably housed. The London Labourers' Dwellings Company and the Suburban Village Company also supply a large number of the poor with comfortable tenements, and the movement has got firm footing in the suburbs and throughout the country. There is, however, still room for an enormous extension of similar operations, and in few ways can the public assistance be just now more usefully applied.

3. Churches and Chapels.

Judging by the accounts which have reached us during the year, of foundation-stones laid, churches consecrated, and restorations effected, the church-architect must be one of the most prosperous of men. But among all the new churches we cannot discover much that is new in conception, or any marked novelty of treatment. We go on, as of old, imitating interminably. Never by any chance do we come across anything in ecclesiastical architecture that seems like the free growth of the mind, the spontaneous play of a well-trained hand. These are fine times for architects, hardly so fine for art.

The new churches are, of course, all Gothic. In ecclesiastical architecture we have definitely adopted—at least for the present—the Mediæval Pointed style, without however having arrived at any agreement as to its distinctive character. We take from any century or country, fashion our only guide—and fashion in church architecture is nearly as mutable as fashion in female costume. The rage at present is for foreign Gothic, and the whim of the moment appears to be to compound the design of all sorts of parts, made up from all ages and all sorts of places. Our nineteenth-century English ecclesiastical architecture will, when it comes to be looked back upon,

present a strange confusion of nationality as well as chronology; and to save our successors, as well as the future New Zealander, from needlessly floundering in their archæological investigations, it would be a benevolent deed of some artistic member of Parliament to introduce a short bill to compel the carving, in plain figures, of the date of its erection on every new church, and the year of its restoration on every restored old one: the name of the architect ought to be appended—but a merciful critic would hardly insist on that.

If, however, there is little originality, and no indication of any development of mediæval style that is distinctive, or promises to be permanent in character, there is, on the whole, better building, and certainly more consideration of the utilitarian purpose of the edifice. Picturesqueness continues to be a grand object with church-architects—the essence of picturesqueness being understood to be the absence of symmetry, *i.e.* irregularity. But it is forgotten, or not understood, that conversely irregularity is not picturesqueness. In truth, the picturesque has another necessary quality—there must be the evidence of absence of intention. The objects must have grown to be what they are, not have been made so. The true picturesque is the effect of time, change, circumstance: the false picturesque is a studious and elaborate imitation. The interiors, and especially the chancels, of the newest churches are almost always elaborately decorated and coloured, either with surface ornament, or by means of coloured marbles and other natural materials, the decoration generally culminating in the reredos. Pictorial and sculptural designs are also much in request—of course intensely mediæval in aspect; but in spirit their chief agreement with their mediæval models is their utter disregard of truth of circumstance, character, costumes, and accessories. A great evil of this sort of decoration is that much of it is necessarily cheap work, and therefore coarse work.

The churches completed this year in and about London are of little architectural importance. St. John the Evangelist, George-street, Commercial-road, St. George's-in-the-East, is a plain and rather heavy-looking First Pointed brick building, having its side to the street, and the main entrance through the tower, which is crowned by an octagonal spire. But the church is for a working-class population in a very poor neighbourhood, and the interior is planned for bringing the congregation well within hearing of the preacher. It has about 600 sittings, cost about 6,000*l.*, and was designed by the Messrs. Francis. This is Low Church. Its neighbour, St. Peter's, Old Gravel Lane, is Ritualistic, but also intended for a poor congregation, being under the direction of the fraternity known as the St. George's Mission. The building is late First Pointed; externally of ordinary yellow stock bricks with stone dressings; in the interior of red brick with black bands, the piers of the nave-arches being of blue Pennant stone. The decoration is concentrated on the chancel, the floor of which is considerably raised, and which will have an elaborate super-altar of alabaster with a representation of the Crucifixion. It has about 800 sittings. A clergy-house and other buildings are to be added. Mr. F. H. Pownall was the architect.

Christ Church, Chalton-street, Somers Town, is likewise in a

poor neighbourhood, a new district having been formed from a portion of Old St. Pancras, and the vestiges of the former district of St. Luke's, King's Cross, of which the chief part was swept away for the Midland Railway. The church is a neat and carefully-finished early Second Pointed building, having the west gable—in which is a large window of good tracery, with an attached tower 100 feet high—in a line with the shops on either side. The interior has galleries; an oak pulpit, and Caen-stone font—both fairly carved; and affords accommodation for 1000 persons. Attached are schools for 600 children, and residences for the master and mistress. The cost (about 12,000*l.*) was defrayed by Mr. George Moore.

St. Gabriel, Bromley, another workman's church, is a plain First Pointed red-brick building, without aisles, and with the division of nave and chancel only marked by a bell-cote, but withal of decidedly mediæval and rather gloomy aspect. It has 753 seats, all free, and cost about 4,600*l.* The architect was Mr. R. J. Withers.

St. Stephen's, South Dulwich, built to accommodate the wealthier folk accustomed to worship in Dulwich College Chapel, is an elegant and well-finished late First Pointed building, of Kentish rag and Bath-stone, designed by Messrs. Banks and Barry. It has nave and aisles, a clerestorey with gabled windows, an apsidal chancel, and a tower and spire at the north-west. It has 550 seats, but may be enlarged to 730, and cost 8,000*l.*

A larger and more ambitious structure is St. Matthew, Upper Clapton, which consists of nave and aisles, chancel, and a polygonal apse, or sanctuary, with five gabled windows, north and south porches, and a tower and stone spire 180 feet high at the south-east, connected with the chancel by a covered arcade, which serves as an entrance-vestibule for the clergy. The style is early Second Pointed, somewhat French in character. The exterior is of Kentish rag and Bath-stone; the interior has shafts of blue Pennant and red Mansfield stone; the seats and fittings are of oak. The chancel and sanctuary are rather richly decorated; the windows of the latter are filled with painted glass, and the reredos has a representation of the Last Supper in high relief; right and left of the altar are credence and sedilia. The number of seats is 750; the cost was about 15,000*l.* Mr. F. T. Dollman was the architect. Holy Trinity, Eltham, designed by Mr. G. E. Street, A.R.A., is a carefully-planned building, somewhat foreign in character, with a rather richly-ornamented interior—the costly reredos, east window by Clayton & Bell, pulpit, and font being gifts. It has 500 seats, half being free, and cost about 4,500*l.* Two other churches, which it will be enough to mention, have also been opened—St. David's, West Holloway, an early Second Pointed edifice, designed by Mr. E. L. Blackburn, which contains 700 seats, and cost about 3,700*l.*; and St. Matthias, Brompton. Neither is of any importance, architecturally.

Of the churches commenced in London or its vicinity, the most important is the parish church of Kensington, to make way for which the old brick church—whose form is so familiar to every Londoner, and about which so many associations linger—has been pulled down. The new church, of which Mr. G. G. Scott, R.A., is the architect,

promises to be an effective specimen of Mr. Scott's favourite style. In preparing the design, he writes in his report, he has "aimed at giving the church a degree of dignity proportioned to the important rank and position of the parish for which it is intended." Its style will, of course, be late First Pointed, but, as it strikes us, with less of French character in the details than most of his recent churches. It will be large, have "a proportionate architectural dignity" (again using the architect's own words) and be rich in decoration "without going into a luxurious or extravagant scale." A lofty spire will be a leading feature. Its cost is estimated at 35,000*l*. Mr. Scott's other great suburban church, Croydon, approaches towards completion.

A church which, according to the published programme, will have some constructive and decorative character, is the Smithfield Martyrs' Memorial Church, in process of erection in St. John-street, West Smithfield. Intended to serve as a memorial of those who suffered in Smithfield during the Marian persecution, it will have sculptured reliefs, representing the incidents of their martyrdom, and various other essentially Protestant symbols and inscriptions, and is designed especially with a view to preaching and hearing. It will be cruciform, with a tower 120 feet high, and contain 1000 seats. The architect is Mr. E. L. Blackburn.

St. Peter's, Kingsdown Road, Holloway, designed by Messrs. Jarvis; St. Augustine, Highbury New Park; St. Saviour's, Battersea (Mr. C. E. Robins, architect); St. John the Evangelist, South Hornsey, designed by Mr. F. Wallen; St. John's, Poole's Park, Seven Sisters Road, designed by Mr. A. D. Gough; St. Mark the Evangelist, Lewisham, designed by Mr. W. C. Banks; St. Stephen's, Hampstead, one of Mr. S. S. Teulon's very peculiar and characteristic designs; St. Luke's, a large, heavy-looking red-brick edifice, designed by Mr. Champneys, at Kentish Town; and a spacious new stone church at Richmond, are also in course of erection, and some of them have made considerable progress.

Out of London, the most important ecclesiastical edifice consecrated this year is, beyond question, St. John's College Chapel, Cambridge—the most important recent addition, indeed, to the collegiate buildings of Cambridge, and now one of the most conspicuous architectural features in a distant view of the university town. Its form and general appearance will be seen from the engraving (No. 2, p. 151). It will hardly be necessary to say that the architect is Mr. G. G. Scott. Its ground-plan resembles that of Merton College Chapel, Oxford; it has a choir, terminating in a richly-embellished pentagonal apse, and transepts, but no nave. From the intersection a tower (40 feet square) rises to a height of 140 feet to the top of the parapet, the pinnacles being 23 feet higher. On the north-east is a projecting organ-chamber. The length, externally, is 193 feet; the width, 52 feet; height—to the top of the parapet, 50 feet, to the ridge of the roof, 80 feet. Internally, the choir or chapel proper is 143 feet by 34; the ante-chapel, 78 feet by 32. The interior is richly but soberly decorated. The shafts are of coloured marbles; the roof is of oak, coved and divided by groins into nineteen bays, in each of which are representations of illustrious men of the last eighteen centuries; the last bay, however,

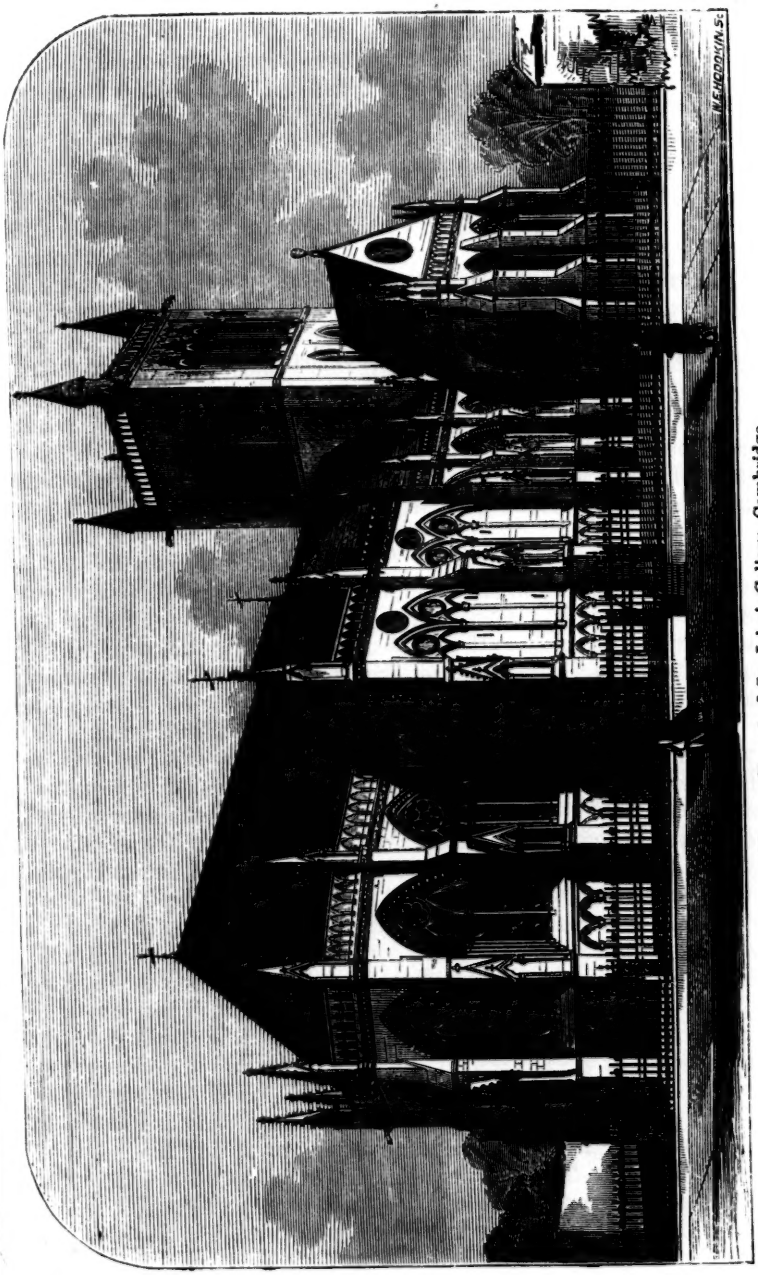
over the altar, has a Majesty. The transepts are vaulted with stone. The stalls are of oak, carved; the windows are filled with painted glass—the great west window, presented by undergraduates of the college, having cost over 1500*l*. The total cost of the building, exclusive of the painted windows and organ, has been about 55,000*l*.

Mr. Street has completed two churches of some importance. St. Margaret's, Prince's Park, Liverpool, is a spacious cruciform structure, early Second Pointed in style, constructed of local grey bricks, with red-brick arches and red sandstone dressings. Externally, almost the only ornament is a large statue of St. Margaret within a niche in the west front. The interior, which is somewhat more decorated, can accommodate a congregation of 1000 persons. The church has cost about 12,000*l*. The other, at Milnrow, near Rochdale, takes the place of a smaller parish church which had become dilapidated and insufficient. The new church consists of nave and aisles of unequal length, that on the south meeting a mortuary chapel of the Schofield family (the chief contributors to the cost of the building); a deep chancel, and a tower 90 feet high. It is early Second Pointed in style, and is built of Huddersfield ashlar and Dunford perpoint-stone. The building stands on high ground, has a commanding appearance, contains 1140 seats, and has cost about 10,000*l*.

All Saints, Sheffield, at the junction of Lyon-street with the Ellesmere and Sutherland roads, is a spacious cruciform church, having accommodation for 720 adults and 260 children, erected by Sir John Brown (of the Atlas Steel and Iron Works), at a cost, including the site, of about 10,000*l*. The body of the church is early Second Pointed in style; the tower and spire at the west end, 190 feet high, First Pointed. As a whole, the church has a somewhat heavy appearance, but is effective at a distance. The architects were Messrs. Flockton & Abbott. St. Silas, Broomhall-street, was erected, at a cost of nearly 8000*l*., by Mr. H. Wilson, being the second church built at his expense in Sheffield. It consists of a nave and aisles; chancel; organ-chamber and vestry; and a tower terminating in eight pinnacles, 94 feet high: is Second Pointed in style, and has a four-light east and a five-light west window. The architects were Messrs. Blackmore and Mitchell-Withers. These make, in all, six churches erected in Sheffield during the last three years.

The West Riding appears, indeed, to have been particularly active in church-building. In Rochdale and its immediate vicinity, seven churches have been completed or advanced during the year. That by Mr. Street has been noticed above. Of the other half-dozen, five are by Messrs. M. & H. Taylor, of Manchester—the most important, perhaps, being St. Peter's, Newbold, not yet finished. The others are—All Saints, Hamer; St. Mary's, Balderstone; St. Edmund's, Falinge; and St. John's, Facit. At Mirfield, Mr. Scott is erecting a large and costly successor to the old parish church; and several others will be found in the following lists.

Nor does Lancashire seem much behind Yorkshire, either in the number or costliness of its new churches. What promises to be one of the most successful is that now approaching completion at Bolton, erected at the sole cost (estimated at over 30,000*l*.) of Mr. P. Ormrod,



No. 2.—Chapel of St. John's College, Cambridge.

from the designs of Mr. Paley, of Lancaster. This architect is also engaged on a spacious and costly church, St. John the Evangelist, at Cheetham, which is being built and endowed at the expense of Mr. Lewis Loyd, of West Wickham, Kent. St. Gabriel, Hulme, is a large brick church—the exterior red, with blue bands and patterns; the interior of white, with red-brick arches and devices—and has nave, aisles, triple apse, and baptistery. The architects were Messrs. M. and H. Taylor, who have also completed the Stowell Memorial church, Regent Road, Salford—a large Second Pointed brick church, with north and south porches, and a detached tower and spire, 150 feet high. The appended lists will supply the names of other new Lancashire churches.

St. Mary, Mortimer, near Reading, Berks, is a pleasing example of a village church, erected on the site of the old parish church, which had become insufficient for the increased population. The new building is early Second Pointed in style; is constructed of Swindon stone, and lined with Bath-stone; consists of nave and aisles, chancel, and a lofty tower and spire. Most of the windows are filled with painted glass; and the reredos, of variously coloured marbles, Derbyshire spar, and jasper, is very elaborate. The cost of the church (about 15,000*l.*) was defrayed by Mr. R. Benyon, M.P. Mr. R. Armstrong was the architect.

St. Barnabas, Jericho (Oxford), deserves note as a departure from the received type, in order to meet, at a moderate cost, the requirements of a large but poor town congregation. Instead, therefore, of the usual Gothic form, the architect, Mr. A. W. Blomfield, has turned to the Roman basilica for his model, with, we are told, a considerable amount of success. To us, the exterior, when not quite finished, appeared rather peculiar than pleasing. The building is a parallelogram, with an apse at each end—at the east for the altar, at the west for the baptistery. The walls are built of the rough local stone, covered externally with cement; Bath-stone is used for the columns, concrete for the arches and cills. The style is quasi-Lombardic, additional effect being obtained by colour. The church will accommodate a congregation of 1000 persons. The cost is said to have been much below that of one of the same capacity built in the customary mode and form.

Of the remaining churches, we give a list arranged, as in previous years, under the First Pointed (or Early English) and Second Pointed (or Decorated) styles. The arrangement must, however, be only accepted as a matter of convenience, and implying merely that the respective churches approximate more or less closely to the style under which they are placed. When not otherwise stated, the church may be understood to consist of a nave and aisles, chancel, vestry, and tower, or tower and spire; unless it be a small church, when it will ordinarily have only nave and chancel, with a bell-turret instead of a tower. We give generally the cost, because, in so brief a notice, it may help to mark the character of the building: this cost, it must be borne in mind, is that of the building only, and does not include the painted windows, or exceptional furniture or fittings. The churches have, of course, been visited where practicable, and information has occasionally been supplied by the architects, or obtained

from private sources; but, in the main, the list is compiled from the *Builder*, *Building News*, *Architect*, *Illustrated London News*, and local newspapers.

Among the churches First Pointed in style, are:—Holy Trinity, *Bingley*, Yorkshire — of rather severe but picturesque character; cost 5000*l.*; tower and spire to be built over the chancel at a future time; architects, Messrs. Nessfield & Shaw. St. Andrew the Apostle, *Kettering;* 500 seats, all free; architect, Mr. G. E. Street. *Broadwinsor*, Dorset; the parish church rebuilt (except the tower) on a larger scale, as a memorial to his wife, by Major Malan; architect, Mr. J. M. Allen, of Crewkerne. St. Gabriel, Barn-street, *Birmingham;* cost 4000*l.*; architect, Mr. J. H. Chatwin. *Cleadon*, Whitburn parish, Durham; 160 seats, cost 1000*l.*; architect, Mr. R. J. Johnson. St. Jude's, *Gatesgill*, near Carlisle; nave, chancel, and side chapel, south porch, and bell-turret at the south-west angle; cost 1100*l.*; architect, Mr. J. Lowe, of Manchester. St. Mark's, Stoney Stanton-road, *Coventry;* of local red sandstone; internal length, 111 feet; cost 4000*l.*; architects, Messrs. Paull & Robinson. All Saints, Far-Gosford-street, *Coventry;* a duplicate of the preceding, by the same architects, but St. Mark's has a memorial east window of painted glass. St. David, *Prendergast*, Pembrokeshire; on the site of the old parish church, but on an enlarged scale, and the old tower preserved; architects, Messrs. Foster & Wood, of Bristol. St. Paul, *Blackheath*, near Halesowen, Worcestershire; of brick and stone; 850 seats, all free; cost 6000*l.*, of which the Earl of Dudley contributed 2000*l.*; architect, Mr. J. W. Hopkins, of Worcester. Christ Church, *Lowestoft*, Suffolk, of white and red brick, with Bath-stone dressings; tower and spire, 80 feet high, at south-east extremity of nave; 500 seats; architect, Mr. H. O. Chambers, Lowestoft. St. Andrews, *Ter Langton*, near Horncastle; on the site of the old parish church, but larger and roomier. It has nave, with aisles and clerestorey; low and shallow transepts; chancel with apsidal termination, lit by seven lancets, and tower and tall spire on the north-west; architects, Messrs. Goddard, of Leicester. *Hailey*, Oxfordshire; in place of the old church, which has been demolished; of local stone, with a good deal of symbolic decoration, and a reredos of three compartments, in which are frescoes of the Three Persons of the Trinity; 230 chairs; cost about 2000*l.*; architect, Mr. C. C. Rolfe. St. Mary Magdalene, *Newtown*, near Wem, Shropshire; 214 seats; cost 1200*l.*; architect, Mr. E. Haycock, jun., of Shrewsbury. St. Catherine, *Pontypridd*, Glamorganshire; architect, Mr. Norton. St. Andrew, *Westgate*, Weardale; small, with apsidal chancel and octagonal turret at the west end; of late but rather severe character; architect, Mr. Withers. The parish church of *Little Ellingham*, Norfolk, having been destroyed by fire, in 1867, when the restorations were nearly completed, has been rebuilt from the foundations, except the chancel, which was only partially destroyed; architects, Messrs. Healey, of Bradford; it will now accommodate a congregation of 230 persons. St. James's, *Birkenhead;* cruciform; tower and spire at the west end of the north aisle; 130 feet high; 800 seats; architect, Mr. C. E. Lang. Schools for 500 children, with houses for the teachers, have been

erected in connection with the church. Great Northern Railway church, *New England*, near Peterborough, constructed for the persons employed in the company's locomotive works; 104 feet long and 48 feet wide, with a low central tower and semicircular apse; 500 seats, cost about 3400*l.*; architect, Mr. Teale, of Doncaster. St. Paul, *Hemel Hempstead*; of flint and stone; cruciform, with a bell-turret 60 feet high at the north-west angle of the nave; font, pulpit, and reredos carved by Mr. Earp; 570 seats, of which 300 are free; cost about 3000*l.*; architects, Messrs. Drury and Lovejoy. St. Nicholas, *Dinnington*, near Sheffield; an elegant little cruciform church, erected at the sole cost of J. C. Althorpe, Esq., lord of the manor; most of the windows are filled with painted glass executed at Munich; architect, Mr. Cawthorne, of Retford. St. Margaret, *Habrough*, Lincolnshire; in place of the old parish church; nave with aisles and clerestorey; apsidal chancel; south porch and low octagonal turret, with short spire at the west end; architect, Mr. R. J. Withers. Holy Trinity, *Egglestone*, Durham; cruciform, with a large south porch, rising from which is a bell-turret 60 feet high; of late character, with a large circular west window, and a traceried east window of three lights; 250 seats, cost about 1500*l.*; architect, Mr. F. R. N. Haswell, of North Shields. *Septon Cross*, near Huddersfield; 400 seats, cost 3800*l.* *Beighton*, Derbyshire, rebuilt, except the tower; the general character of the old church being retained, but with a somewhat greater amount of decoration; architect, Mr. Rollinson, of Chesterfield. *Walton*, Cumberland; on site of the old parish church, but of larger dimensions; of local red sandstone; nave and aisle, chancel with triple lancet filled with painted glass by Wailes of Newcastle; and square tower at the north-west, surmounted by a tall pyramidal slate roof; cost 2000*l.*; architects, Messrs. Paley & Austin. St. Augustine, *Wisbech*; late in character; of brick with stone piers and dressings; 500 seats, cost about 3000*l.*; the pulpit of stone and alabaster with red marble columns, lectern, and reading-desk, were presented; architect, Mr. W. Smith. St. Cymbrid, *Llanddulas*, Denbighshire; erected at the expense of R. B. Hesketh, Esq., of Gwrych Castle; 500 seats, cost nearly 6000*l.*; architect, Mr. G. E Street, A.R.A. St. Thomas, *Pensford*, Somersetshire; on the site of the old parish church, the tower of which is retained; cost about 1000*l.*; architect, Mr. C. E. Giles. St. John, *Worksop*; has a western tower and spire, 140 feet high; architects, Messrs. Clarke, of Nottingham. St. Peter's, *South Huish*, near Kingsbridge, Devonshire; in place of the old church, which had become ruinous; the five windows of the chancel are filled with painted glass by Lavers and Barraud, as a memorial of the late Lord Justice, Sir George Turner; 350 seats; architect, Mr. R. Coad. St. James and St. John, *Derwent*, Derbyshire; of the local gritstone; consists of nave and arcades, large chancel and aisle, south porch, and a tower, as yet incomplete, at the north-west angle; architect, Mr. W. White.

Churches, Second Pointed in style, have been erected, among other places, at:—*Shildon*, Durham (All Saints); French in character; 450 seats; architect, Mr. J. P. Pritchard, of Darlington. St. Leonard's, *Padiham*, Lancashire; of stone; cruciform, with aisles to chancel as

well as nave; tower 115 feet high, with eight crocketed pinnacles; octagonal turrets to the transepts, containing staircases to the galleries; south porch and vestry; a good deal of external and internal carving, and ten of the windows filled with painted glass by Wailes, of Newcastle; 1000 seats; cost 8000*l.*; architect, Mr. W. Waddington, of Padiham. Holy Trinity, *Chester*, on the site of the old church, but on a larger scale, and having a tower and spire 155 feet high. Besides some good carving, there are an elaborate reredos, and two or three painted-glass windows. Designed by the late Mr. J. Harrison, it was completed by Messrs. Kelly & Edwards, of Chester. Holy Trinity, *Pleshey*, Essex; built on the site, and a careful copy of, the fine cruciform parish church erected by Thomas Woodstock, Duke of Gloucester, youngest son of Edward III., some remnants of which have been preserved; architect, Mr. Chancellor, of Chelmsford. *Appleton-Roebuck*, near York; of Bradford stone, with Ancaster-stone dressings, the inner walls lined with red brick; cost 2000*l.*; architects, Messrs. Atkinson, of York. *Gamblesby*, Cumberland; of local red stone, with a slated spire at the west end; cost 1000*l.*; architect, Mr. C. J. Fergusson. St. John, *Accrington*, Lancashire; a plain cruciform building, with the nave in a single span of 92 feet by 40, and a narrow south aisle; belfry and octagonal spire; architect, Mr. H. Macaulay, of Accrington. St. Ann's, *Warrington*, Lancashire; cost 5200*l.* St. Philip and St. James, *Hallow*, Worcestershire, in place of the old church, which is retained as a mortuary chapel, the new one being on a more convenient site near the entrance to the village. The new church consists of nave, with aisles, the roof being of open timber with stone ribs, the thrust of which is resisted by flying buttresses; chancel and stone porch,—the tower and spire being left for erection when funds are available. The interior has a considerable amount of decoration: the reredos of Caen-stone, having in the centre a representation of the Crucifixion in high relief, and figures in alabaster of the Seven Angels of the Churches, executed by Mr. Boulton, of Cheltenham, was given by the Earl of Beauchamp. The building cost about 4000*l.*; architect, Mr. Hopkins. St. Innocents, *Tuck Hill*, Alveley, near Bridgnorth; of red sandstone, with Bath-stone dressings; the east window of painted glass, by Lavers & Barraud; 225 seats; architect, Mr. J. P. St. Aubyn. St. Jude's, Tettenhall-road, *Wolverhampton*; cruciform, with a tower at the west end; of Codsall stone, with dressings of light-coloured stone; the shafts supporting the nave-arches and clerestorey are of polished Aberdeen granite; 812 seats; cost 4500*l.*; architect, Mr. Bidlake, of Wolverhampton. The site, and 2000*l.* towards the endowment, were contributed by Miss Stokes. *Avon Dassett*, Warwickshire, in place of the old parish church; has a tower and spire at the west end, 125 feet high; cost about 3000*l.* St. Michael, *Frosterley*, Durham; of a somewhat foreign character; cost 3000*l.*; architect, Mr. G. E. Street, A.R.A. St. Saviour, *Shanklin*, Isle of Wight; nave and chancel with aisles; tower and spire, 115 feet high, to be added at the south-west angle; architect, Mr. T. Hellyer, of Ryde. Christ Church, Port Vale, *Bengeo*, near Hertford; cruciform, with apsidal chancel, south porch, and bell-

turret at north-west angle of nave; architect, Mr. T. Smith, of Hertford. *Little Birch*, near Hereford; on the site of the old parish church, but of somewhat larger dimensions; consisting of nave and north aisle, chancel with polygonal apse, and bell-turret over the west gable; of Ham Hill and Bath stone; the windows filled with painted glass; architect, Mr. W. Chick, of Hereford. St. Mary-the-Virgin, *Freeland*, Ensham, Oxfordshire; the south porch has a parvise over it, which serves as a passage to the parsonage; of local rubble-stone, with Bath-stone dressings; erected at the cost of Mr. W. E. Taunton and family; architect, Mr. J. L. Pearson. *Hollybush Common*, near Castle Morton, Worcestershire; of local stone, with Bath-stone dressings; cost about 700*l.*; architect, Mr. Preedy. St. Peter's, *Lampeter*, Cardiganshire; in place of the old parish church; of early type, with lancets in the aisles, cusped circles in the clerestorey, and five-light east window of plate tracery in the chancel; buttressed tower at the south-west angle, with low pyramidal spire; architect, Mr. R. J. Withers. St. James's, *Flockton*, West Riding, Yorkshire; nave and north aisle, chancel and aisle, south porch, and bell-turret at the west end; exterior of local stone; internal walls, nave and chancel arches, of red brick; east window filled with painted glass, by Mr. Bagaley, of Newcastle-on-Tyne; 450 seats; cost about 2600*l.*; architect, Mr. W. H. Crossland. St. Thomas, *Batley*, Yorkshire; of the local delph-stone, with Finsdale-stone dressings; has a tower and spire, 150 feet high, at the south-west angle; cost 6000*l.*; architect, Mr. M. Sheard: the large five-light east window is filled with painted glass. St. James's, *Hereford*; of local stone, with Bath-stone dressings; cruciform; with south porch, which forms the substructure of the future tower and spire; architect, Mr. T. Nicholson, of Hereford. *Brace-Meole*, near Shrewsbury; the font, pulpit, and reredos, all of coloured marbles, with elaborate carving, by Mr. Boulton, of Cheltenham, and the painted glass of the east window, by Messrs. Morris, were donations; architect, Mr. E. Haycock, Jun., of Shrewsbury. Lammas-street, *Carmarthen* (chapel-of-ease to St. David's); chancel, with tower over it, 94 feet high; of local stone, with Bath-stone dressings; 630 seats; cost 3,600*l.*; architect, Mr. R. K. Penson, of Ludlow. St. John the Evangelist, *Hoyland Swaine*, Yorkshire; of local stone; 300 seats (children's included); cost 4000*l.*; architect, Mr. W. H. Crossland. All Saints, *Slingsby*, Yorkshire; on the site of the old church, and corresponding in the mixture of styles, but larger; erected at the expense of the Hon. Admiral Howard; several of the windows are of painted glass; about 350 seats; cost about 5000*l.*; architect, Mr. Johnson, of Newcastle. St. Michael, *Frosterly*, Stanhope-in-Weardale, Durham; of local stone, with freestone dressings; 270 seats; cost about 2500*l.*; architect, Mr. G. E. Street, A.R.A. *Long Eaton*, Derbyshire; the old church has been restored, and now forms the south aisle of the new church, which consists of nave and aisles with chancel, &c., and has nearly three times as many seats as the old building; the interior is handsomely decorated, and there are painted-glass windows by Messrs. Ward & Hughes, and Hardman; architect, Mr. G. E. Street, A.R.A. *White Waltham*; the parish church has been almost

entirely rebuilt, and a north aisle, and tower at the north-west angle, added—some Norman and First Pointed portions of the old church being preserved; painted-glass windows, by Mr. Wailes, of Newcastle, and Messrs. Clayton & Bell, have been inserted; architect, Mr. G. E. Street, A.R.A. St. Mark, *Friday Bridge*, Cambridgeshire; cruciform; of Whittlesea bricks, with Ancaster-stone dressings; 300 seats; cost about 2500*l.*; architect, Mr. J. H. Owen; several of the windows are of painted glass, by Messrs. Heaton. St. Nathaniel, *Windsor*, Cheshire; 108 feet by 52; cost 3300*l.*; architect, Mr. D. Walker. *Titley*, Herefordshire; on site of the old church, which had become dilapidated; of Penrhos stone, with Bath-stone dressings; early in character; comprises nave and north aisle, chancel and south porch, the old tower being retained; some of the windows are filled with painted glass; 220 seats; architect, Mr. E. Haycock, Jun. St. Mark, *Winshill*, near Burton-upon-Trent, Derbyshire; tower and spire at the west end, about 150 feet high, containing a peal of six bells; of Hollington stone, with Mansfield and Bath-stone shafts, capitals, and dressings; the interior of brick, plastered; chancel much ornamented; an elaborate reredos of Caen stone, with dwarf alabaster columns, and richly carved and diapered; east windows of seven lights filled with painted glass; 550 seats; architect, Mr. Holmes.

Churches are being *restored* so generally, and so thoroughly, that soon there will be no old church left unaltered. Even where the exteriors are left for a little longer, the interiors are swept out, newly garnished, and re-seated. The time has clearly arrived which Pope adumbrated, when it would be held for orthodox, that

> "The Christian is an infidel
> That sitteth in a pew."

We may notice what is being done at some of the cathedrals: ordinary church restorations are quite beyond chronicling. Against one kind of so-called restoration—the transformation of the interior of Wren's city churches (as at St. Swithin's, Cannon-street) into tawdry semi-Gothic—we must, however, in passing, enter a stern protest. It is an act of unmitigated and indefensible vandalism, comparable only to that of transforming a "Madonna" of Raffaelle into the semblance of one in a mediæval illumination, or a fashionable painted window.

The works at Gloucester Cathedral have been prosecuted with great spirit, and begin to show signs of completeness. Since we last wrote, much has been done to the choir, and a splendid reredos, and other decorative fittings, added; the south porch, and the chapels of St. Paul and St. Philip, have been thoroughly restored, as well as much more of the exterior. Mr. Scott estimates the cost of restoring the choir at 15,000*l.*—of the entire restorations, at about 40,000*l.* The construction of the new nave to Bristol Cathedral, under Mr. Street's superintendence, proceeds steadily. It will be 119 feet long and 69 feet wide, have a groined stone roof, and terminate at the west in two tall towers. At Worcester, the restoration has been continued under Mr. Scott, and some new windows erected and filled with painted glass. At Bath, Mr. Scott has completed the groining of the nave and aisles, altered the position of the organ, and effected

some other improvements. It has been decided to restore the magnificent west front of Wells Cathedral—a perilous undertaking, considering the importance of the front as a matchless, if not unique, illustration of the condition of sculpture in England at the time of its erection. We can only hope that Mr. Ferrey, to whom the restoration is confided, will take care that the proceedings are conducted in a strictly conservative manner, and that the contractors, clerk of works, and carvers employed are closely watched. The choir of Exeter Cathedral is likewise to undergo a thorough restoration, from the hands of Mr. Scott, at an estimated cost of 12,000*l.*—unless recent episcopal changes interfere.

The choir of Ripon Cathedral, which had been nearly seven years in the hands of the workmen, was reopened in February, having undergone a complete transformation, under the direction of Mr. Scott. The work has been thoroughly but carefully executed, and the whole rendered, as far as practicable, conformable to its original aspect. The towers have been strengthened, and some ornamental repairs effected in the transepts. The restoration of the nave is the work now on hand. At Lincoln there has been some renovation, chiefly about the north transept. At Lichfield, a new great west window, the tracery differing from that of the old one, has been erected from the designs of Mr. Scott, and filled with painted glass by Clayton & Bell, as a memorial of Canon Hutcheson.

The restoration of the exterior of Salisbury Cathedral, commenced in 1863, is now nearly finished. It has included not merely superficial renewals, but the strengthening of the foundation throughout; and the replacement of finials, pinnacles, parapets, copings, and even flying buttresses, which had fallen into a dilapidated or unsafe condition. For the decayed Purbeck marble window-shafts, others have been substituted of Devonshire marble, and everywhere the security as well as appearance of the building has been regarded. The chief work, however, has been the strengthening of the matchless tower and spire, so as to ensure its future safety. "This object," say the Dean and Chapter, in their very full report on the restorations, "has been fully accomplished by means of an ingenious and elaborate system of iron ties, devised by Mr. Shields, the eminent civil engineer, whom Mr. Scott had called in to assist him in this delicate operation." Next to the security of the tower, the restoration of the west front was the principal work. As will be remembered, the entire front was covered with empty niches, once however filled with statues, as the remaining vestiges proved. These statues, 123 in number, it was inferred, formed together a Te Deum or theological scheme. The restoration of the whole series was entrusted to Mr. Redfern, and already fifty statues have been placed in their niches. Our readers may like to have the official statement of the complete scheme:—"In the panel of the great gable of the west front is a colossal figure of Our Saviour, seated in Majesty. Ranged in successive tiers below this grand central figure, there will be in the first tier figures of angels; in the second, of prophets and patriarchs; in the third, of apostles and evangelists; in the fourth and fifth, of saints, martyrs, and founders." The choir of Salisbury Cathedral is to be completely restored, as a

memorial of the late Bishop Hamilton. Mr. Scott estimates the cost at 15,000*l*. The same ubiquitous architect has also in hand the restoration of Chester Cathedral.

Mr. Scott has completed the restoration of the chancel of St. Asaph Cathedral; and he has made good progress with the works at St. David's. The parts completed have cost above 18,000*l*., and about 11,000*l*. will be required for the parts remaining, which include the nave and aisles, transept, and chapter-house. Llandaff Cathedral has been for twelve years under Mr. Pritchard's management; nave, choir, and arcades have been restored; the clerestorey rebuilt, and north and south towers strengthened and renewed. The works remaining to be carried out are chiefly decorative.

In our metropolitan cathedrals, the work has been mainly a continuation of that reported last year. At St. Paul's, what is principally worth noting is the placing in the east window of a representation of the Crucifixion, the gift of the Drapers' Company, executed at the Royal Glass Works, Munich. The picture (for such it is) was designed by Julius Schnorr von Carolsfeld, the cartoon prepared by his pupil Strähuhn, and the painting executed under the superintendence of Ainmüller; the architectural framework, a sort of triumphal arch, having been designed by Mr. Penrose, the cathedral architect. It is an excellent specimen of its class, and less out-of-keeping with the building in which it is placed than it would be in a Gothic cathedral, but hardly satisfactory even here. However, other windows are to be filled with corresponding paintings, and we may reserve criticism till we see the effect of the whole. At Westminster, the great work is the restoration, or (virtually) the rebuilding, of the Chapter House, under the direction of Mr. Scott. From the deplorable condition to which this beautiful building had been reduced, nothing else was possible; and we have Mr. Scott's assurance that all that can possibly be saved of the old work will be preserved intact, whilst the new will be, as far as possible, an exact reproduction of the original. The exterior, which may be regarded as wholly new, already presents a noble appearance; and the interior, as yet in too chaotic a condition to be fairly judged, will, we have scarcely a doubt, be equally satisfactory. In the Minster itself, some careful restorations and reparations have been made: a new painted window has been erected as a memorial of Chaucer, as well as another by the Milton monument; and the tomb of Henry VII., and some other ancient monuments, have been restored—a measure which has called forth some animadversion, but which seems to us to have been carried out in a proper spirit.

The Roman Catholic body have been busy in church-building, and meditate yet greater things. Subscriptions have been zealously sought, as well on the Continent and in America as in England, for the erection of a metropolitan cathedral in Westminster; and a sufficient sum having been obtained to commence the work, "two pieces of land, containing nearly three acres, and possessing an independent frontage on almost every side, have been purchased in Carlisle-place, Victoria-street." On this site it is intended to erect a cathedral, of "such proportions of scale, grandeur, and utility, as befits the matu-

rity of the Catholic Church in England, the advanced civilisation of our times, and the dignity of the see of the metropolis of the British Empire." The style is to be "English, and grandeur, stateliness, solidity, spaciousness, and majestic elevation being preferred to miuute and elaborate ornament, the earlier period of that style will be adopted." Whether these swelling words portend a building that shall throw the neighbouring Abbey into the shade, we shall see, perhaps, in time. Mr. Clutton is entrusted with the preparation of the designs; meantime, a residence and offices, capable of serving as a temporary church to hold 2000 people, is to be erected from designs furnished by Mr. G. Blount.

Of the churches actually built about London, the most important is that of Our Lady of Victories, Newland-terrace, Kensington, which is intended to serve as the "pro-cathedral," pending the completion of that at Westminster, instead of St. Mary's, Moorfields, which has hitherto held that distinction. The building is large—156 feet long, 60 feet wide, and 70 feet high—and consists of nave and aisles, an apsidal sanctuary 40 feet high, with side-chapels of Our Lady and the Blessed Sacrament, a chapter-house, and sacristy. The style is early Second Pointed; but the building is marked rather by a mixture of gloominess and assumption than grandeur or beauty. Mr. G. Goldie was the architect. A church at West Drayton, designed by Messrs. Wilson & Nicholl, though much smaller, is of more pleasing character. It is early Second Pointed, and will accommodate a congregation of 500. Another church, of rather pleasing design, has been erected at Sunbury-on-Thames. It is built of Kentish rag; has an apsidal chancel, and the interior is richly decorated; the architect was Mr. C. Buckler. A small brick chapel has been built at Ongar, and another at Southend, Essex. Among the churches opened farther from London, may be mentioned that of St. Gregory, Longton, Staffordshire, a large and richly-ornamented structure of red brick with Bath-stone dressings, Second Pointed in style, designed by Mr. E. W. Pugin; it will accommodate 1000 persons, and cost 7000*l*. Several chapels have been built adjoining private mansions. One by Swinnerton Hall, near Stone, Staffordshire, is a handsome early Second Pointed building, designed by Mr. G. R. Blount, and erected at a cost of over 4000*l*., defrayed by members of the Fitzherbert family. It consists of a tribune for the family, chancel and aisle, porch, belfry, and sacristy. Mr. Blount has also erected an elegant chapel, Second Pointed in style, at Burton Park, near Petworth, Sussex, the seat of A. J. W. Biddulph, Esq. At Exton Park, Rutland, the seat of the Earl of Gainsborough, a cruciform chapel has been attached to the east wing of the mansion. It is a neat Second Pointed building, with an entrance by a north porch from the village of Exton.

Among Dissenters there has been a good deal of chnrch-building, but we have failed to discover any originality or even novelty of design, or special adaptation to the distinctive requirements of the forms of service. Even the freedom from convention that might be looked for is wanting. The characteristic is imitation, and the imitation is feeble. The Congregationalists have erected an expensive church at *Clifton Down*; it is cruciform, with a large open porch of three

arches as the main entrance, and from the intersection is to rise a tall tower. The style is early Second Pointed; the architects are Messrs. Hansom, of Clifton. At *Halifax*, a large church, like the preceding, of local stone, with freestone dressings, has been erected, from the designs of Messrs. Rogers of Halifax, at a cost of about 7000*l*. It has a tower and spire at the south-west, and, with the galleries, will accommodate 930 persons. At *Luddenden*, near Halifax, a handsome church, 100 feet long, 40 feet wide, and 40 feet high, Lombardic in style, has been erected from the designs of Mr. R. Nicholson. At *Ilkley*, Yorkshire, a rather richly-decorated late First Pointed church has been built from the designs of Mr. J. P. Pritchett, of Darlington, capable of holding 650 persons. At *Swansea*, a church has been erected from the designs of Mr. J. Paull, of Manchester; First Pointed in style, with seats for 1000 persons. Others have been erected at *Boston*, Lincolnshire; Gothic in style, with some peculiarities of design; of red and white bricks, with dressings of Ancaster stone; 700 sittings, cost 2000*l*.; architects, Messrs. Innocent & Brown, of Sheffield. *Chard*, Somersetshire; First Pointed in style; of stone, with a tower and lofty stone spire at the south-west angle; cost 3000*l*.; architect, Mr. Stent, of Warminster. *Bognor*, Sussex; of flint, with Bath-stone dressings; First Pointed in style; 350 sittings, but provision made for galleries; cost about 2500*l*.; architect, Mr. C. O. Blaber, of Brighton. Others, mostly plain in character, have been built at Godalming, Surrey, and elsewhere.

The Wesleyan Methodists have erected many chapels, but few which call for notice. At Mostyn Road, Brixton, one of some pretension has been built from the designs of Mr. J. Tarring; it is Second Pointed in style, but it does not differ materially from other Wesleyan chapels by the same architect. The chief feature of the exterior is a tower and spire, at the north-west angle, 160 feet high. The interior is divided into nave and aisles by cast-iron columns, which carry galleries. It will accommodate a congregation of 1100, and cost about 8000*l*. Longsight Chapel, Manchester, is a large cruciform Second Pointed building, with a tower and lofty octagonal stone spire on the left of the principal entrance. It is constructed of Durnford Bridge and Hudson's Field-stone, has an open timber roof, contains 1150 seats, and cost about 8000*l*. The architect was Mr. G. Woodhouse.

Other Wesleyan chapels have been built at *Pilsley*, Derbyshire; of brick, with stone dressings; Second Pointed in style; cost about 800*l*.; architect, Mr. S. Rollinson, of Chesterfield. *Market Weighton:* Italian in style; 400 seats; cost about 1600*l*.; architect, Mr. W. Botterill, of Hull. *Barnstaple:* on the site of the old chapel; is of Bath-stone; Second Pointed in style; the interior arranged with especial regard to ventilation, and ready egress in case of panic; 900 seats; cost about 2000*l*.; architect, Mr. Lauder, of Barnstaple. *Landkey*, near Barnstaple, by the same architect; of local stone, with Bath-stone dressings; Second Pointed; cost 800*l*. *Lower Broughton*, Manchester: style, Italian, of a somewhat ornamental character; 950 sittings; cost 6000*l*; architect, Mr. W. Waddington, of Burnley. *Bredgar*, Kent; Gothic, 300 sittings; cost 1500*l*.;

architect, Mr. Carey. Girlington Road, *Bradford*: Gothic; has large galleries, and the very objectionable arrangement of class-rooms in the basement; in the rear are ministers' and deacons' vestries; 840 sittings; cost 4000*l.*; architects, Messrs. Andrews of Bradford. *Wibsey*, near Bradford: Second Pointed in style, 82 feet by 50; 450 sittings (with arrangement for galleries to contain 500 more); cost 1500*l.*; architects, Messrs. Andrews & Pepper. *Alsager*, near Sandbach, Cheshire: Gothic; of red bricks, with white bricks in bands, and stone dressings; about 500 sittings; cost 2,500*l.*; architect, Mr. G. B. Ford, of Burslem. *Goldenhill*, near Tunstall, Staffordshire; cost 2200*l.*; architect, Mr. Roberts, of Trentham. *Burscough Bridge*, near Ormskirk, Lancashire; cruciform; First Pointed in style; of brick in pattern-work, with stone dressings; 500 sittings; cost about 1000*l.*; architect, Mr. T. Bridge, jun. Charnum-street, *Hungerford*: First Pointed in style; 400 sittings; cost 2000*l.*; architects, Messrs. Wilson & Wilcox, of Bath. Norfolk-road, *Brighton*: early Second Pointed in style; cruciform, consisting of a nave and chancel, shallow transepts, and a spire rising from the south porch to a height of 115 feet. The south transept serves as an organ-chamber, the north as a vestry. Below the chapel is the unwholesome arrangement of class and examination rooms. The chapel contains 1200 sittings; the architect was Mr. C. O. Ellison, of Liverpool.

The New Connexion, United, Free and Primitive Methodists have built chapels at Keighley, Chesterfield, Shipley, Stockton, and many other places, and some of them are large and expensive buildings, but space forbids us to particularise them further.

The Baptists have built new chapels at Clerkenwell, at Northampton, and various other places, but they have not lately displayed as much architectural activity as some other sects.

The United Presbyterians, an active and well-to-do body, have awakened during the last few years to the desirableness of having in England a better class of churches than they had before been content with, and carving and colour are no longer regarded as unholy. A church recently opened in Camden-road may be taken as a modest specimen. It is built of Kentish rag and Bath-stone, Second Pointed in style, with some foreign details; and comprises nave and aisles divided by round columns, which carry an arcade of wide arches and a clerestorey; a coved roof, shallow transepts, and apsidal termination, where and on the roof colour and ornament are freely employed. At the east end is a large six-light window with fair tracery; a tower and spire are to be added. Others might be mentioned, as at Birkenhead, a large Second Pointed building, designed by Mr. J. N. Crofts; at Rochdale, a spacious Gothic cruciform building, designed by Messrs. Woodhouse; at Darlington, a handsome late First Pointed building, designed by Mr. J. Ross, with an apsidal chancel, a painted-glass east window, and a tower and octagonal spire 120 feet high; at Leicester, a neat and carefully-finished First Pointed church, designed by Mr. J. Tait, of that town, who has also erected one somewhat similar in character at Derby; at Plymouth, Italian in style, Mr. J. L. Hodge, architect—and elsewhere.

But the most costly of the Dissenting churches completed this year

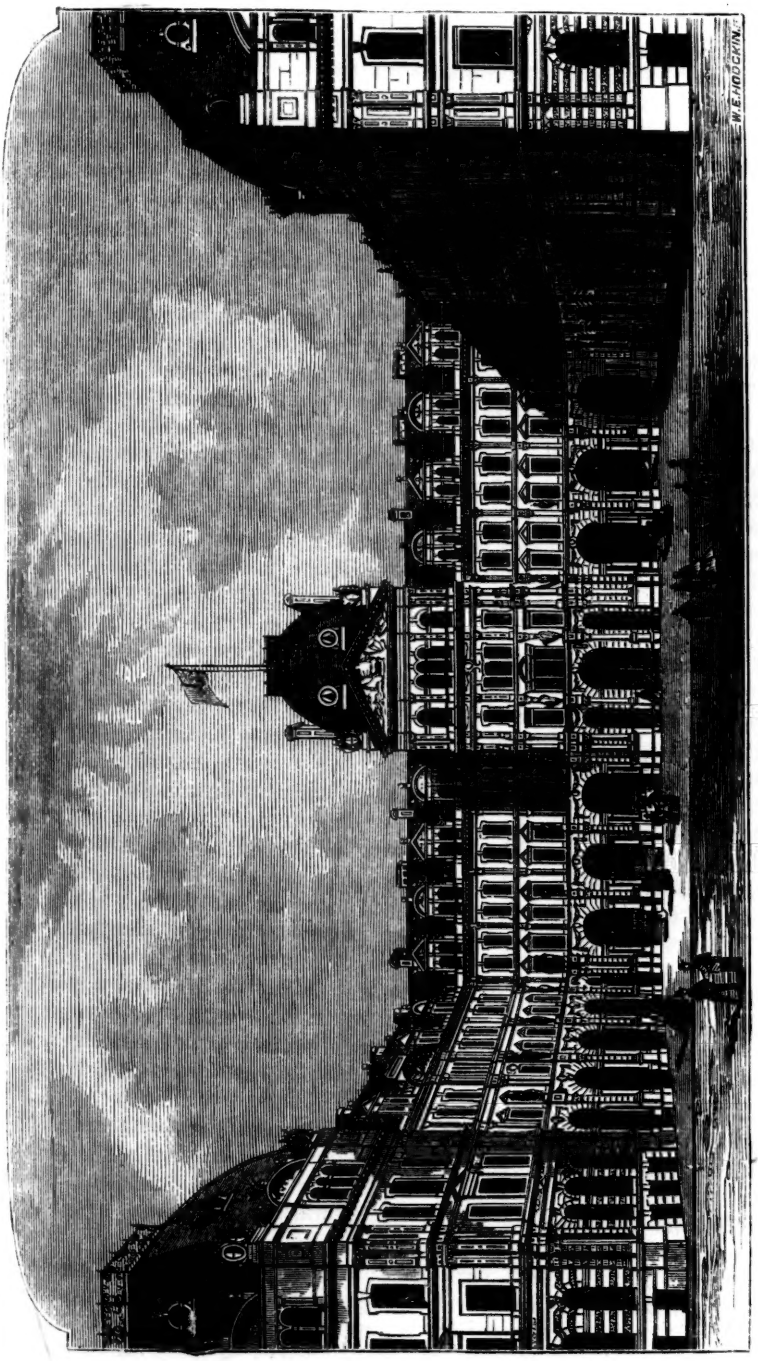
is the Unitarian Chapel, Todmorden, erected by Messrs. Fielden, as a memorial of their deceased father. It is a Gothic structure, consisting of nave, aisles, and chancel, with a tower and spire rising to a height of 190 feet, and, from being finely placed on the hillside, is seen to great advantage. The church is built in the best manner, and beautifully finished throughout. The chancel is paved with Sicilian marble; the font is of white marble, the pulpit of oak on a polished granite base, the seats and fittings throughout of oak; several of the windows are of painted glass; in the belfry is a fine peal of eight bells. The chapel contains only 500 seats, and is said to have cost above 25,000*l*. The architect was Mr. J. Gibson.

4. Buildings for Public Purposes.

The municipal, corporate, and great commercial buildings erected from time to time in our larger towns are at once the most palpable evidence and the readiest tests of the progress of the country in wealth, industry, and taste. During the last half-dozen years we have seen in the pages of the "Companion" representations and descriptions of numerous large and costly town-halls, exchanges, assize-courts, and the like; but none to surpass, and few to equal, the Manchester Town Hall, the Birmingham Corporate Buildings and Assize Courts, and the Liverpool Exchange.

The Manchester Town Hall is only in an early stage, while the Birmingham Buildings are hardly commenced, and further notice of both may be deferred to another year. The New Exchange, Liverpool, is however approaching completion, and we give an engraving of it (No. 3). The new building occupies the site of the former Exchange, erected in the early years of the present century, and long the pride of the city. But a building which was regarded as magnificent sixty years ago was found too restricted for the Liverpool of to-day. The New Exchange, of which Mr. T. H. Wyatt is the architect, not only covers the site of the former Exchange, but also that of the neighbouring sessions-house, and the street which separated the two buildings. As will be seen, it forms three sides of a quadrangle; but the fronts of the wings are extended some distance beyond the limits of the engraving, the length across from wing to wing being about 416 feet. The height of the central tower, from the level of the quadrangle to the top of the balcony, is ninety feet; the eastern and western towers are each seventy-five feet high. The building is four storeys high, and contains some 250 offices; but besides this, the whole area of the quadrangle has been excavated, for the most part, through solid rock, and two storeys of fireproof cellars constructed underneath "the flags"—the lowest floor being appropriated to the storage of wines and spirits in bond, which are raised from the cellars by hydraulic lifts.

As will be seen, the style is Renaissance, French in character, but treated freely. The exterior walls are of the warm-coloured Staffordshire sandstone, Caen-stone being chiefly used in the interior and for the carvings. The engraving will give a sufficient idea of the general appearance and character of the building; but, though very carefully



No. 3.—The New Exchange, Liverpool.

reduced from a photograph and drawings kindly lent for the purpose by the architect, it cannot, from its scale, possibly show the elaborate details of so extensive a surface. In addition to trophies and other architectural carving, a considerable amount of excellent sculpture has been introduced in the exterior; the whole of it having been designed by Mr. W.F. Woodington, under the guidance of the architect. Along the line of the parapet of the arcade is a series of six statues—Columbus and Drake being in the west wing, over the entrance to the newsroom; Mercator and Raleigh in front of the central tower, and over the public passage from the quadrangle to Oldhall-street; and Cook and Galileo in the east wing, facing Columbus and Drake. The tympanum of the pediment over the newsroom entrance contains a group of numerous figures representing Commerce, and the corresponding tympanum of the east wing another representing Navigation. In the great tympanum of the central tower the sculptor states that he wished to set forth how, "under the direction of Philosophy (or Wisdom), Science and Commerce extend the benefits of culture, arts, manufactures, and trade to all people." Whilst Philosophy, therefore, is the central figure of the group, Science, on the one hand, is as her agent teaching the uncivilised tribes; and on the other, Commerce is exchanging manufactured articles with the Persian, Hindoo, African, Chinese, and Polynesian for the products of their several lands. The trophies symbolise the various scientific and industrial pursuits—as chemistry, electricity, engineering, shipbuilding, and the like. On the attic of the north front are four well-designed statues of the Elements, relics of the old Exchange.

The general effect of the exterior is at once rich and noble, partly from its magnitude, partly from its form—which, while giving largeness to the masses, allows a bold and effective play of light and shade,—at the same time that much is due to the ample employment of sculpture and ornamental detail, which relieve without frittering away the breadth of surface. The plain rusticated basement and arcades help the general impression of solidity. The massive and highly-enriched central tower, and the plainer wing-towers with their pavilion roofs, agreeably break the skyline, and are of great value in the general composition.

Of the interior, as far as completed, the most striking feature is the newsroom, in the west wing, which has been for some time open. This splendid room, the finest probably of its kind extant, is 164 feet long, 90 feet wide, and 50 feet high, with a central dome 50 feet in diameter, and 83 feet high. The walls are of Caen-stone, the dado of Bardiglia marble, the columns and pilasters of Irish red marble; the panels of the end-galleries are inlaid with coloured alabaster; the floor is of oak, &c., in patterns. Above the cornices are statues and allegorical groups of sculpture, and decorative painting and gilding are freely employed. The tower and contiguous apartments are occupied by the underwriters. In the east wing will be the Stock Exchange, the offices of the Magnetic Telegraph Company, municipal offices, &c., whilst the vaults contain bullion-rooms, &c. The whole has been executed, in two contracts, for 150,000*l*. It is anticipated that the building will be entirely completed in 1870.

Chester Town Hall, erected in the place of the old hall, destroyed by fire in December 1862, was formally opened by the Prince of Wales on the 15th of October, 1869. The new building, which occupies a site nearly opposite that of the former hall, is an ornate and effective structure. The style is a free adaptation of Venetian-Gothic, and its somewhat quaint but picturesque outline harmonises well with the character of the city buildings. It contains a great hall, council-chamber, magistrates' room, &c. The central tower, a conspicuous feature at a distance, is 160 feet high. The architects are the Messrs. Lanyon, of Belfast. It has cost about 25,000*l*.

A Town Hall has been erected at Mirfield, in the West Riding of Yorkshire—a stone building, Italian in style, with a great room designed for concerts as well as town meetings, and capable of holding 1000 persons. The architects were the Messrs. Kirk. The building cost about 4000*l*. At Stratford, Essex, a large and showy semi-classic Town Hall has been erected at the corner of West Ham-lane, from the designs of Messrs. Angell & Giles. The principal front has a boldly-projecting Corinthian portico in two stages, terminating in a balustrade with groups of sculpture at the angles. At the right of the portico rises a tower, with a pavilion roof, 100 feet high. The portico and rounded corners have columns of polished granite. The great room is 72 feet long, 50 feet wide, and 30 feet high. The cost of the whole has been about 20,000*l*.

New Law Courts have been erected in Small-street, Bristol, on part of the site of Colston House, but they are not of much architectural value. A public hall, with stage and fittings, designed by Mr. G. B. Nichols, of West Bromwich, has been opened at Walsall; and extensive public buildings (including a great hall for meetings and concerts) at Truro.

The new Corn Exchange and Market, Shrewsbury, is a large and ornate structure, Italian Renaissance in style, of somewhat irregular form, owing to the inequality of the site and the fall of the ground; but having a long nave, and, as the chief feature, a lofty central transept with a clocktower and spire, 150 feet high, on one side—presenting a striking and picturesque appearance, both in parts and as a whole. The building is of red brick, with stone dressings; its entire length is about 340 feet, its greatest breadth about 150 feet. The centre, or transept—which, besides being raised above the nave, is much more ornamented—is the Corn Exchange. The market-hall is a fine room, 90 feet long, 45 feet wide, and 60 feet high. The fish-market is at the Bellstone end of the building, where the fall is greatest. On the Mardal side is an arcade of shops. The architect was Mr. R. Griffiths, of Stafford.

In the thriving little straw-plaiting town of Luton, Beds., two Plait Halls and a Corn Exchange were opened, with some ceremony, in January last. The Plait Halls, for the sale of different kinds of straw-plait, are rather plain brick buildings (133 feet by 60, and 100 feet by 90) with roofs of iron and glass, designed by Mr. R. M. Ordish, C.E. The Corn Exchange, on Market Hill, is Italian-Gothic in style, with a clocktower 85 feet high, and is built of red brick with Bath-stone dressings. The large hall is fitted with a gallery at the end,

so as to serve also for public meetings and concerts, and beneath it is a provision market. The architects were Messrs. Grundy & Messenger; the cost was about 8000*l.* At Exmouth, extensive improvements have been made, of which a new market-house, 120 feet long by 60 feet wide, erected by the Hon. Mark Rolle, at a cost of 6000*l.*, forms a prominent feature. Market-buildings have also been erected at Hemel Hempstead, a neat red-brick and stone Jacobean edifice with a bell-turret, designed by Mr. G. Low; at Shiffnal, a market-hall and assembly-room, designed by Mr. Bidlake; at Burnham, a market-house, with a town-hall on the first-floor (architect, Mr. Down); at Cannock, at Clevedon, and elsewhere. New cattle-markets have been constructed at Doncaster, large and well arranged, from the designs of Mr. Watkins of Lincoln; at Wisbech, on the site of the old market, but with superior arrangements; at Hanley, Staffordshire, and in other places. Fish-markets have been opened at Swansea and elsewhere; and in their plans there is now generally noticeable a much more careful provision for ensuring cleanliness, ventilation, &c.

Columbia Market, the splendid structure built by Miss Coutts at Bethnal Green, London, was so fully noticed in previous years that it is now only necessary to record its completion. As a whole, the buildings form a very picturesque group, and they are admirably constructed. With a structure in all respects so excellent in purpose and so conscientiously executed, it is painful to express any dissatisfaction, but it is impossible to visit it without being struck with a sense of its exceeding inappropriateness to its purpose and position. The great hall, the marketplace proper, is a noble pile, but, externally and internally, it is essentially ecclesiastical. Its style is the fashionable early Second Pointed, with large and handsome mullioned and traceried windows. Inside it is a fine apartment, 100 feet long, 50 feet wide, and 50 feet high, divided into seven bays by lofty clustered granite columns (twice the height of those of Salisbury Cathedral), with bronze bands and capitals, from which spring the moulded ribs of a groined wooden roof. In the aisles are the shops, twenty-four in number, fitted with polished slabs of Irish marble, and having over them a gallery, with an ornamental railing, reserved for the sale of flowers, fruit, and other light articles. The large open quadrangle is appropriated to dealers of an inferior class. A lofty clocktower, residences, a tavern, and a coffee-house, complete the design. All the arrangements for loading and unloading, cleansing, the supply of gas and water, and the like, have been carefully studied and well worked out. Altogether the market, apart from what we cannot but regard as the fundamental error as to the style and its excessive costliness, is a splendid monument to the munificence of its founder, and the skill of the architect, Mr. A. Darbishire. The market, which covers an area of two acres, is said to have cost over 200,000*l.*, and this, it will be remembered, is only a part of the large-hearted scheme; a series of blocks of model dwellings having previously been erected by Miss Coutts contiguous to the market, while additional works are we believe, contemplated.

At Folkestone, a spacious and well-planned bathing establishment has been constructed, from the designs of Mr. Gardiner—a precursor, we

hope, of many of these much-needed institutions. Reading, billiard, and assembly rooms form a part of the establishment. Brill's Baths, Brighton, have been extended by the erection of a large and handsome swimming-bath for gentlemen, designed by Mr. Scott.

Several hospitals and asylums have been completed, and others commenced, during the year. The Prudhoe Convalescent Home, Whitley Links, near North Shields—erected as a memorial to Algernon, fourth Duke of Northumberland, at a cost of about 20,000*l.*—is an unpretending but pleasing Domestic Gothic building on the pavilion plan, designed by Mr. T. Oliver of Newcastle. It has a frontage of 230 feet, with a depth of 190, and will accommodate about 60 inmates, to be raised eventually to 100. The whole is fireproof, and the appliances are on a liberal scale. At Eastbourne, Sussex, a convalescent hospital has been opened, intended, when the design is fully carried out, to accommodate 300 inmates. It is a Gothic building, of red brick and stone, on the pavilion principle, Mr. H. Woodyer being the architect. A well-arranged building for the reception of convalescent patients from St. George's Hospital, London, founded by Mr. Morley Atkinson, has also been opened at Wimbledon. At Hanwell a Roman Catholic hospital has been erected at the cost of the Baroness Weld; it is a neat Gothic building, designed by Mr. E. W. Pugin.

Several large institutions for the London poor are in course of erection. At South Hornsey, close to the Alexandra Orphanage, an immense workhouse, with infirmary on the pavilion principle, has been built for Islington parish, from the designs of Mr. R. H. Burden, at a cost of about 65,000*l.* For St. Pancras parish, a vast infirmary has been built near the top of Maiden-lane, Highgate. The building, which is nearly completed, comprises five blocks on the pavilion plan, each for thirty-two beds, with residences for nurses, a sixth for separated patients, an administrative block, dead-house, &c. The arrangements seem good, and the site is naturally healthy; but the building is so situated that the female wards look directly upon the grounds of the Smallpox Hospital, the male wards upon Highgate Cemetery. The contract was taken for 32,000*l.*; the architect was Mr. J. Giles. Asylums for insane and imbecile paupers have been commenced at Leavesden, near Watford, for the northern parishes (to accommodate 1500 patients, and cost 90,000*l.*), and at Caterham on a similar scale for the southern parishes. Sites have also been purchased at Haverstock Hill, for a fever hospital for the north-west parishes, and at Homerton for a fever and smallpox hospital for the north-east district. Ground for a school for 700 pauper children has likewise been purchased for St. Pancras parish at Leavesden, but there seems to be a growing disposition to resist the carrying-out of some of these costly schemes. In the country, infirmaries similar in character are being built at Wantage and elsewhere.

Whilst, however, these large establishments continue to be erected, the excessive mortality observed in them is leading to a strong feeling that the curative process would be better effected in smaller houses; and hence what are called Cottage Hospitals, where fewer patients are congregated, and homely habits and home-nurses are possible, are

becoming increasingly popular. Such are those now erecting by Sir Edward Hoare, at Ashford, Kent; the National Cottage Hospital for Consumption, at Ventnor, Isle of Wight; and, in a measure, the City Missionary's Seaside Home, a block of cottages recently built by Captain Huish in a pleasant spot between Ventnor and Bonchurch.

Rivalling in excellence of purpose and munificence the gifts of Miss Coutts and Mr. Peabody, is that of Mr. Josiah Mason, of Birmingham, who has recently presented to that town the Erdington (or, as it will undoubtedly be henceforth called, the Mason) Orphanage. Some ten or twelve years ago, Mr. Mason established an orphanage on a small scale, the management being under his personal supervision. Finding his plans succeed, he converted the original building into almshouses for twenty-six widows, and has had a new orphanage erected (Mr. J. R. Botham being the architect) for 300 children, with capacity for extension to 500, of whom two-thirds are to be girls. Having completed and furnished the building at a cost of 60,000*l*., Mr. Mason presented it, along with an endowment (of 1032 acres of freehold land) valued at 200,000*l*., as a free gift to the town. The building is an irregular oblong, with a principal façade 207 feet long; and having a central tower 200 feet high, and two others respectively 120 feet and 110 feet high. It is a modification of Italian-Gothic in style, very carefully finished, and from some points picturesque. The internal arrangements and appliances are complete and well studied. The grounds occupy about thirteen acres.

The Spurgeon Orphanage, Stockwell, so named after the Rev. C. H. Spurgeon, under whose direction the institution is, originated in the donation of 20,000*l*. by a widow, a member of Mr. Spurgeon's church, for the purpose of founding a home for orphan boys. On Mr. Spurgeon undertaking to direct the foundation, his congregation raised nearly 15,000*l*. for the building, in order to reserve the original sum for the endowment. The orphanage, which will eventually accommodate 250 boys, has made sufficient progress to permit the reception of eighty, who are admitted by the trustees. The building, which is convenient rather than beautiful, was designed by Mr. J. Cubitt. A neat and convenient edifice has been erected at Hampstead, from the designs of Mr. E. Ellis, for a Sailors' Daughters' Home. It will accommodate 100 children, and has cost about 10,000*l*. Spacious new buildings have been commenced at Watford for the London Orphan Asylum, at present at Clapton. The new asylum is to cost 63,000*l*., and accommodate 450 children. Two additional houses, each for fifty children, will be added by the Grocers' Company and the Ladies of Hertfordshire, at a cost of 3000*l*. each; and a handsome chapel, to cost 5000*l*., by Mrs. Pickett, formerly superintendent of the institution.

A new Orphan Asylum has been erected at Upper Henwick, Worcester: the style mixed Gothic; the architects, Messrs. Watkin & Walker. The Manchester District Schools, for the orphans of warehousemen and clerks, have been erected, for the reception of 100 children, at Cheadle Hulme. The Earlswood Asylum for Idiots is being extended. A Boys' Refuge Farm School has been built at Bisley, Surrey, from the designs of Messrs. Habershon, to accommo-

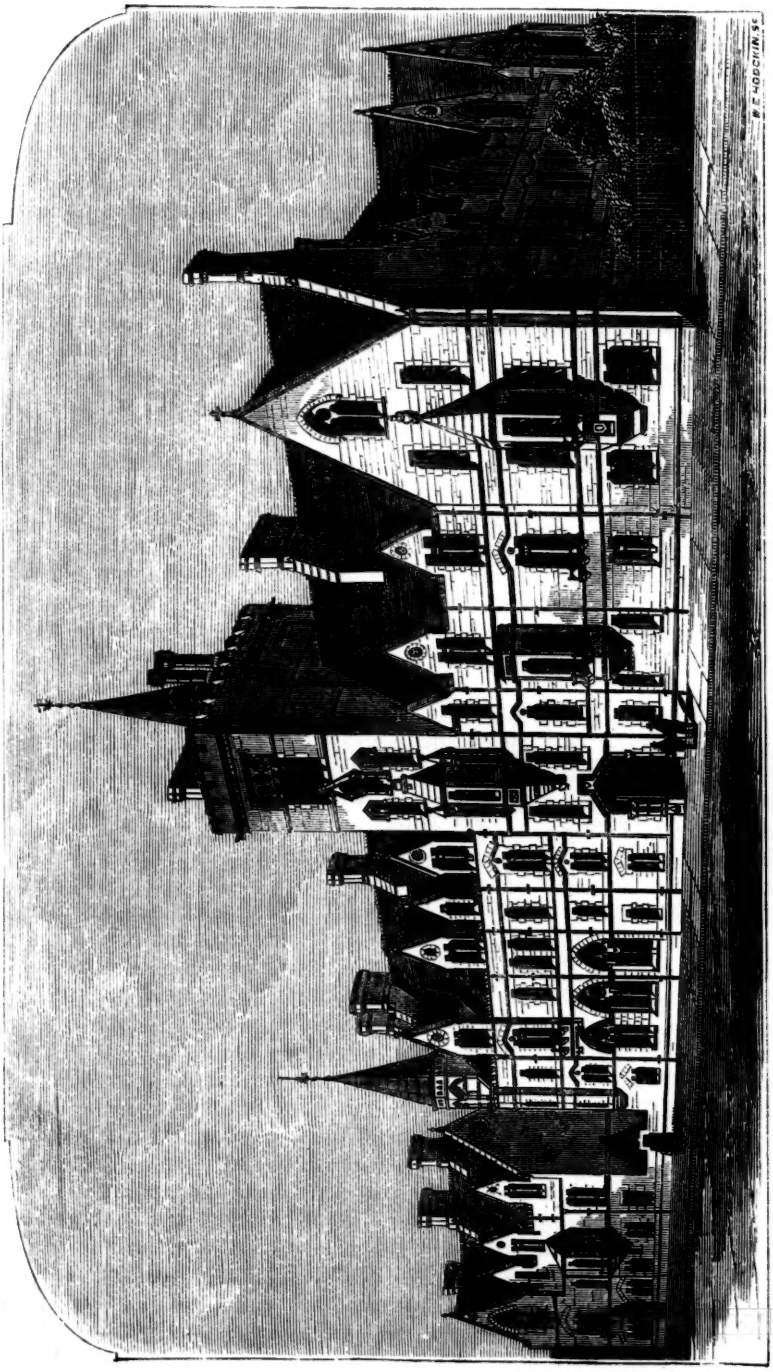
date 150 boys; attached is a farm of eighty-eight acres. The Magdalen Hospital, Blackfriars-road, is about to be removed to a new Magdalen Asylum just completed at Streatham. The Ipswich Borough Lunatic Asylum is in course of erection at Felixstow. It will be a large, cheerful-looking, and well-arranged building, of white Suffolk bricks with stone dressings; the architect is Mr. W. P. Ribbans.

5. Buildings connected with Education, Art, &c.

As the representative work of the year in this class, we give an engraving of the New Buildings of Balliol College, Oxford, lately completed (No. 4). Sufficiently agreeing with the older buildings of Balliol in style, and fairly harmonising with the general character of the Oxford Colleges, the architect, Mr. A. Waterhouse (the designer of the successful Manchester Assize Courts), has not allowed himself to be too much hampered by precedent, and consequently there is a pleasant freshness and vigour as well as propriety in the structure. The engraving will best show its general appearance. The new buildings comprise a new south front to the College, and a Master's house. Balliol is indebted for them to the filial Oxford spirit of Miss Brackenbury, the daughter of a former Fellow of Balliol, who has borne the cost of their erection—about 30,000*l*. Much less in keeping with the old college architecture of Oxford, and much less characteristic or pleasing in itself, we fear, will Mr. Butterfield's new Keble College prove. It stands near the University Museum, and therefore somewhat apart from the other colleges—happily (at least architecturally) for it and them. The buildings are of many-coloured bricks; the style, of course, Gothic. Looking at it lately, and while still unfinished, it seemed to have an odd particoloured, quaint, and crochety aspect; but it may, and we hope will, prove more agreeable when completed. The new Examination Schools, on the site of the long famous Angel, threaten to be rather a gloomy-looking pile. The new Clarendon Laboratory, required for the extended study of physics and the natural sciences in the University, is making good progress. In general character it will harmonise with the Museum, which was erected by the same architect, Mr. T. N. Deane, in conunction with the late Mr. Woodward.

At Cambridge, the great work of the year is, of course, the Chapel of St. John's College, described in an earlier section. Other important works in progress are the new buildings for Gonville and Caius College, by Mr. A. Waterhouse, in a later style than his Balliol buildings, and hardly promising to be as successful. The Hall of St. Catherine's College has been metamorphosed from a plain room of Queen Anne's time into nineteenth-century Gothic, and the rest of the college is to undergo a like orthodox renovation. Renovation, extension, improvement, or alteration of some sort is going on at other colleges, but for the present this general allusion will suffice.

At Eton, a new chemical laboratory has been erected, from the designs of Mr. Wilkinson, of Oxford; some new masters' houses have been built, and others enlarged, and to one a spacious music-hall has



No. 4.—New Buildings of Balliol College, Oxford.

been attached. Louth Grammar School has been rebuilt from the designs of Mr. J. Fowler, of Louth. It is of the usual Collegiate Gothic style; of red brick and Ancaster stone; of little pretension, but pleasing and picturesque. Grammar-schools have also been built at Coatham, Yorkshire, and one or two other places. The once celebrated Reading School is about to be removed; the new building will be at Redlands, and will cost about 25,000*l.*; Mr. A. Waterhouse is to be the architect. For the Charterhouse School, London, a fine building is in course of erection near Godalming, Surrey. The old Charterhouse will be the future home of Merchant Taylors' School —the Merchant Taylors' Company having bought the property for 90,000*l.* Owens College, Manchester, is to be remodelled, and a spacious new building is proposed to be built for it, but we believe the scheme is not fully matured.

Among special institutions may be noticed the Wesleyan Methodist Theological College at Headingley, near Leeds. The building consists of a centre, with a projecting entrance-tower, 70 feet high, and wings; detached chapel, professor's house, &c. With the present arrangements it will accommodate 40 students. The cost was about 17,000*l.*; architects, Messrs. Wilson & Wilcox, of Bath. A new Congregational College at Brecon, also for training young men for the ministry, has been opened. It is a Gothic building, massive in character, of local stone with Bath-stone dressings; has a centre, with entrance-tower 100 feet high, and wings; residences for the principals and tutors, an infirmary, with all necessary appliances, and affords accommodation for 22 students.

The West of England College for Dissenters, at Taunton, is a neat semi-Gothic building, with accommodation for 150 boarders, erected from the designs of Mr. J. James. Like most of these buildings, the chief feature of the exterior is a central entrance-tower. A new Roman Catholic college, to be called "St. Joseph's College of the Sacred Heart for Foreign Missions," has been begun at Mill Hill, Hendon. The buildings are to be Lombardo-Venetian in style, and provide accommodation for 80 students, besides the officials. Mr. G. Goldie is the architect.

A large pile of buildings, having a frontage 300 feet long, has been erected at Kempston, near Bedford, for the Bedfordshire Middle Class School. The buildings are of red brick and stone, a modification of the Collegiate Gothic, with a rather florid entrance-tower in the centre, a chapel at one end of the long front, and the master's house at the other. The architect was Mr. F. Peck. The London Middle Class School, founded three or four years back in Bath-street, City-road, having proved thoroughly successful, a permanent building has been constructed, for the reception of 1000 boys, in Cowper-street, Finsbury. The building is of brick, three storeys high, and makes little architectural pretension; but it has a substantial air, and is said to be skilfully arranged. The architect was Mr. E. N. Chilton. The site cost 30,000*l.*; the building, 16,000*l.*

An institution, that appears calculated to be of great local service, has been founded at South Shields, by Dr .T. M. Winterbottom, of that town, who had already erected twenty-two cottages for decayed ship-

masters. The object of the Winterbottom Nautical College is to give the best possible instruction to seamen, and especially to masters and officers of ships, in "every kind of mathematical and other learning that can be interesting or useful to a sailor." The building is a handsome Jacobean structure of two storeys, with a tower at one corner. The ground-floor contains spacious school and class-rooms; in the upper storey are the lecture theatre, museum, &c; whilst one floor of the tower serves as a compass-room, and the topmost (fitted with a revolving dome) has a good 7-inch equatorial telescope.

The Wedgwood Institute, Burslem, more than once adverted to in previous years, has been formally opened. As may be remembered, it was the aim of the architect, Mr. R. Edgar, to carry out the purpose of a memorial to our greatest potter, by making terra-cotta and ceramic enrichment the main feature of the façade, constructively, and not merely as surface decoration. Not having seen the building, we cannot speak with any confidence of the result; but some trustworthy authorities regard it as successful, at least to the extent of proving the feasibility of this novel kind of ornament. The building includes a school of art, museum, free library, &c. The Nottingham Mechanics' Hall, partially destroyed by fire in 1867, has been rebuilt, on a somewhat larger scale, from the designs of Mr. T. Simpson. Lecture-halls have been built at Westbury; Cavendish, Suffolk, &c.; and a large and handsome Gothic building is in course of erection at Keighley, Yorkshire, from the designs of Messrs. Lockwood & Mawson, which is intended to serve for a school of science and art and a mechanics' institute.

The Architectural Museum, Bowling-street, Westminster, has a modest red-brick front, with statues of Architecture and Sculpture, terra-cotta heads of Wykeham and Wren, and some ceramic enrichment. In it the honorary architects, Messrs. J. Clarke & E. Christian, have shown how possible it is to produce effect at a very small expenditure.

Colston Hall is the name of a large building, recently erected at Bristol, for concerts and meetings. The great hall is a fine room, 150 feet long, 80 feet wide, and 72 feet high, and capable, it is said, of seating 3000 persons. The "lesser hall" is about 90 feet by 35. The architects were Messrs. Foster & Wood. The same architects are erecting a new Philosophical Institution in Park-street, Bristol, near the Victoria Rooms. The new building is to be Gothic, of Farley Down red-stone, with dressings of Bath-stone.

Several new theatres have been erected, but they will not, fortunately, require a lengthened notice. Chief among them is Her Majesty's Theatre, which was completed in ten months, Mr. C. Lee being the architect. Externally, no change has been made. Internally, "the house" has been constructed on the old lines, the chief difference being in the stage, which is much deeper, and greatly more commodious; whilst the abandonment of the little Bijou Theatre has permitted the construction of various additional rooms, and the adoption of improved working appliances—thus placing the theatre on a level as to stage appointments with the best extant. The "house," or auditorium, is of the former horseshoe form, is 70 feet from the curtain to the back,

and 50 feet across where widest. There are four tiers of boxes, an amphitheatre, and a gallery. The proscenium is 40 feet wide and 36 feet high. The fittings and decorations display little novelty, but, alike for appearance and adaptation, the inside of on opera-house can only be properly estimated at a performance, and Her Majesty's Theatre has not been yet subjected to that ordeal.

The Gaiety Theatre occupies the site of the Strand Music Hall, and retains something of its Gothicism of character in the pointed arches of the gallery, and the decoration. The theatre is of the ordinary horseshoe form, opening out, however, somewhat more than usual to the proscenium by arms of contrary flexure. The house has a balcony, two tiers of boxes, and a gallery. From the curtain to the back of the pit is about 50 feet; the height to the centre of the ceiling is 54 feet; the proscenium is 30 feet wide, and 29 feet high; the stage is 41 feet deep. The decorations, generally, are light and fanciful; but the main feature is the painted frieze over the proscenium, representing a mediæval king, with his queen and court, watching the performance of a masque. It is painted by Mr. Marks, and displays much of his distinctive humour and appreciation of character, but is seen with difficulty from the stalls. The architect was Mr. C. J. Phipps. The Globe Theatre, in Newcastle-street, is not a separate building, but the application of a portion of the unfinished Strand Hotel. It has, consequently, no exterior, so to speak; and the interior, though not unpleasing, and sufficiently commodious, has a slight makeshift look. The Charing-cross Theatre is merely a modification of the hall in which Mr. Woodin gave his popular entertainment, and is slight and coarse—corresponding to the performances.

Two more country theatres have been destroyed by fire—the elegant Theatre Royal, Hull, only erected in 1866 (see the "Companion" for 1867, p. 174); and the old Theatre Royal, Durham.

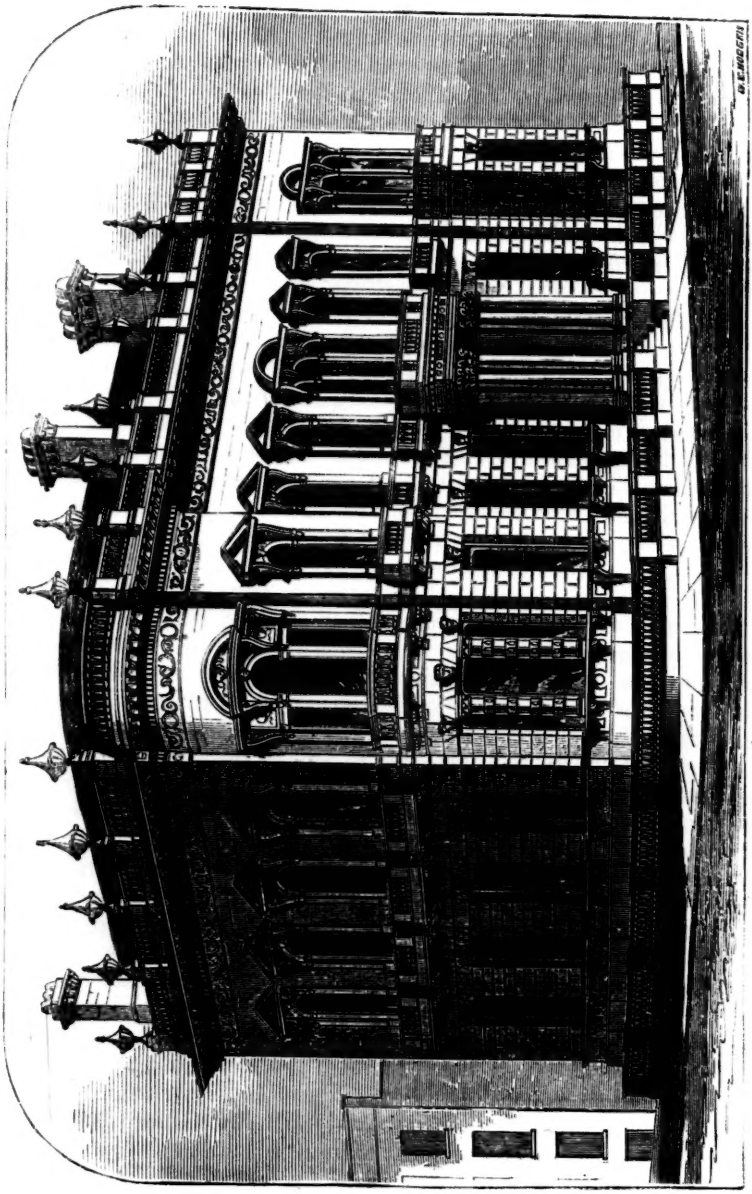
6. Street Architecture.

Fewer additions than usual have been this year made to our civic architecture. The vast and costly street improvements have cleared the way for the architect, but rather delayed his work. Yet, as we have already pointed out, some fine buildings have been carried far towards completion on the line of the Holborn Viaduct and its immediate vicinity, which will doubtless soon afford quite a new architectural scene. Whilst, then, it will be needless to dwell upon this branch of our subject, we may notice, in passing, that several offices, warehouses, and other business premises have been completed, and many more are in progress, of considerable architectural character. Generally, a semi-classic Italian is the favourite style, where any definite style is followed; and almost always there is some carving, more vigorous perhaps than refined, but helping to break the monotony of the streets, and a very free use of polished granite. The most conspicuous illustration of the employment of this material is, perhaps, the nearly-finished front of the Scottish Widows' Fund office, opposite the Royal Exchange, Cornhill; an Italian classic

façade of four storeys, in which the whole of the ground-floor, and the columns on every floor, are of polished granite. In some new warehouses and offices of a semi-classic character in Basinghall-street may be noticed the characteristics above referred to—in one building coarse, but not ineffective, carving being the chief ornament; while in the other, the architect has mainly relied on his polished granite shafts. One or two large blocks in this neighbourhood are of a mixed Gothic character, of red brick and stone, with prominent roofs and ridge ornaments. The attention now given to material is well shown in a large block of offices in Mark-lane, which is further worth notice as exhibiting a rather expressive adaptation of late Lombardo-Gothic to business purposes. Here the piers are of grey granite, the shafts up to the second storey of polished red granite, those of the third storey and the bosses of green serpentine, while the capitals and carving generally are of Caen stone, the wall being faced with Portland stone. At the corner of Ivy-lane, Paternoster-row, directly opposite to Messrs. Longmans', a spacious range of publishers' and other offices, of a showy semi-classic character, has been erected from the designs of Mr. W. Ellison. Other city offices, some warehouses in St. John-street, and the like, might also be noticed; but these will probably suffice. At the West End the most noticeable new business house is the large Renaissance building opposite St. James's Church in Piccadilly.

In the country towns, generally, a marked improvement is visible in the character of the newly-erected business premises. For some years the warehouses and offices of the great Yorkshire clothing towns have been equal in costliness and architectural character to similar buildings in London, and there is no apparent abatement in the spirit of the merchants and manufacturers. Manchester has, perhaps, shown somewhat less activity; but in Liverpool, large and stately commercial premises have of late greatly increased, and Birmingham has erected a fair number; while Bristol, and some of the smaller towns of the west, are starting with fresh energy in the race. Buildings of this class have, in fact, become so numerous throughout the country, as to render particularisation impracticable; all we can do is to notice a few representative works of a somewhat more public kind.

Foremost among these special buildings may be placed the Union Club House, Birmingham, the first club-house erected in that town. It is situated at the top of Newhall-street, near the Bank of England. The engraving (No. 5), made from a drawing of the building, and a large photograph taken during the progress of the works, kindly furnished by the architect, Mr. Yeoville Thomason, will best explain the character of the exterior. The style, as will be seen, is Italian; the material is Pillough limestone. The four massive monolith columns of the portico have Corinthian capitals; the keystones of the arches have admirably-carved heads; the frieze above the first-floor windows is elaborately-carved scrollwork, with shields of arms; above that is a cornice of bold design, surmounted by a balustrade with pilasters bearing vases. As a whole, whilst the body of the building is rich and varied in ornament, the decoration is nowhere



No. 5.—Union Club House, Birmingham

obtrusive, and the rusticated ground-floor and massive balustrade which surrounds the basement area ensure sufficient breadth and solidity of effect. The interior vies in splendour with our London club-houses. The great hall and staircase are of ample dimensions, large in style, richly decorated, and well lighted. On the ground-floor are morning, dining, strangers', and other rooms, connected by a corridor. A mezzanine contains bath and dressing-rooms, lavatory, &c. On the first-floor are a spacious drawing-room, card and billiard-rooms, and library, all of which are handsomely, and some splendidly, fitted. The kitchens, servants' rooms, and offices are on the second-floor. The building is intended to accommodate 700 members. Altogether, it must be regarded as the most important recent addition to the architecture of Birmingham.

Close to the Union Club House is the Birmingham Town and District Bank, by the same architect. The style is Italian, but considerably modified, and far less ornate than the building just described. The principal front is of Bath-stone. The ground-floor is occupied as the bank, the upper floors as offices. Of a more stately character is the Midland Bank, Birmingham, at the junction of New-street and Stephenson-place. It is of Portland stone; in style Italian classic, of a severe type; and has a tetrastyle Corinthian portico, each of whose massive columns is a monolith of polished grey Cornish granite. The banking-room, a handsome apartment 92 feet long, 49 feet wide, and 30 feet high, is lit by a large central lantern, in addition to the nine side-windows. The architect was Mr. E. Holmes, who also designed the Exchange opposite. The Alliance Bank, Liverpool, is a large and lofty pile, with three fronts of Ruabon stone, Italian Renaissance in style, of a very ornate character, designed by Messrs. Lucy & Littler. For the Bury Banking Company, a large and ornate Italian building has been erected in Bury, Lancashire, from the designs of Messrs. Blackwell, of that town. At Huddersfield, a building of Lombardic character, having on one side a square tower capped with a pyramidal roof, has been erected, from the designs of Messrs. Paull & Ayliffe of Manchester, for the Union Bank, but which will be in part occupied by the Huddersfield Chamber of Commerce. The new City and County Bank, Kidderminster, and some others, have also been completed. Offices for the London and Globe Insurance Company have been erected in Corn-street, Liverpool, from the designs of Mr. W. B. Gingell.

New Post Offices are being built by the Government in several of the more important towns, and there can be little doubt that when the telegraph business is added to the constantly developing business of the Post Office proper, the additional space and better arrangements required will, in many cases, render new buildings necessary; and opportunities will thus be afforded of placing in our provincial towns buildings of a higher class, though not necessarily of a costlier kind, than the ordinary commercial premises. The country Post Offices now in course of erection are generally described as classic in style, and almost always have an air of solidity—ornament being sparingly introduced. Of this order are those now nearly completed in Victoria-street, Derby, and at Leamington; and such, though on a

larger scale, will be the new Central Office opposite the Town Hall, Birmingham, and that by the Old Haymarket, Sheffield.

The mania for gigantic hotels has somewhat abated. Those now in progress are chiefly at the termini or chief stations of the great railways, and of these several have been long on hand. The great structure erecting from Mr. Scott's design in front of the Midland Terminus, St. Pancras, after an interval of rest, is again being pushed forward. The enormous North-Western Hotel at the Lime-street Station, Liverpool, is also making evident progress. So is the Central Station Hotel of the Great Northern Railway Company at Leeds, a large Lombardic edifice, having towers with tall pavilion roofs at the angles, and a good deal of well-executed carving: the design is by Messrs. Hadfield. Of a different class is the New Grand Pump-Room Hotel, Bath, just completed from the designs of Messrs. Wilson & Wilcox, and corresponding in character with the new Pump Room built by the Town Council. It is a lofty semi-classic pile, with advanced wings, which are surmounted by tall pavilion roofs, and has an imposing appearance. At Bristol a huge hotel has been built by a "limited liability" company, from the designs of Messrs. Foster & Wood; but, whatever may be its internal merits, its exterior aspect is far from satisfactory. At Sherborne, Dorset, a spacious Gothic hotel has been built, from the designs of Messrs. Carpenter & Slater, as a part of very extensive improvements that are being carried out under their supervision in the southern part of the town.

7. Bridges and Docks.

By the time this volume is in the reader's hands, Blackfriars Bridge will have been opened for traffic; but such ample accounts of it will have appeared in the newspapers, that any lengthened description here would be superfluous. The bridge has five arches of wrought iron; the shore arches being each 155 feet in span, the next 175 feet each, and the centre arch 185 feet. The arches are surmounted by a cast-iron balustrade of what is officially designated Venetian-Gothic. The distinctive feature from the river is a series of short massive columns, in front of the piers, about 7 feet in diameter, of polished red granite, with boldly-carved capitals of Portland stone. These columns are to be surmounted with bronze statues, or groups, and something is evidently necessary to render less obtrusive their monstrous disproportion and purposelessness. The roadway of the bridge is 75 feet between the parapets; the gradient is 1 in 40. As a specimen of engineering the bridge is admirable; in point of art praise must be more qualified. What is good in it is, moreover, much injured by the proximity of the viaduct of the London, Chatham, & Dover Railway (the work of the same engineer, Mr. J. Cubitt), which materially interferes with the view of it from the river, and blocks out the view from it of St. Paul's and the river eastward. The foundation-stone of the new bridge was laid on July 20, 1865, and it was formally opened by the Queen on November 6, 1869.

Woolwich and Deptford Dockyards have been finally closed as shipbuilding establishments, and Sheerness will probably be closed

immediately the works at present on hand are completed. On the other hand, important extensions and improvements are in progress at Chatham and some of the other government yards. But these works, and the dockyard and coast fortifications, are beyond our province.

Last July the Prince and Princess of Wales formally opened the new Albert or Western Dock, Hull, part of the extensive dock system of that port. The new dock, designed by Mr. J. Hawkshaw, is one of the largest in the kingdom. It is 3300 feet long, and varies in width from 430 to 180 feet, the area being over 23 acres. The entrance to it is by the basin of the Humber Dock, which has been enlarged to a length of 1000 feet, and a width of 300 feet. The lock-chamber is 320 feet long and 80 feet wide, and admits at spring-tides a depth of 30 feet of water. Extensive wharves and warehouses have been constructed, and hydraulic machinery and the most approved appliances provided. The cost of the works is said to have been about 1,000,000*l*. A few days before opening the new dock at Hull, the Prince and Princess of Wales had performed a like ceremony at King's Lynn, where a dock with a water-surface of about 6½ acres had been constructed, under the direction of Mr. Brunlees. The new dock is in form an irregular quadrangle—780 feet long on the south side, 590 feet on the north side, and 440 feet where widest, with an average depth of 31 feet. The lock-gates are 58 feet wide. In the Morpeth Branch Basin, Birkenhead has added another link to her vast chain of docks. At Exmouth new docks on a smaller scale, but sufficient for the port, have also been opened. The new Channel Docks for Bristol, at Avonmouth, are advancing slowly, and a project is maturing for rival Channel docks for Gloucester. At Fleetwood a dock, 600 feet long and 400 feet wide, has been commenced. New harbour works have been begun at Carnarvon.

A new promenade pier has been opened at Scarborough. It is of iron, about 1000 feet long and 23 feet wide; the head about 140 feet long by 50 feet wide. It consists of a series of continuous girders, carried on 13 clusters of piles, in spans of 66 feet. At the head is a spacious saloon, and landing-inclines are available for all kinds of craft at any state of the tide. A pier very similar in construction, and looking but a fragile defence against a north-east gale, is erecting at Hunstanton. At Clevedon, a pier has been opened, about 800 feet long, formed of continuous iron girders resting, in spans of 100 feet, on clusters of piles strongly braced together. It is intended to serve both as a pleasure pier, and for vessels to load and discharge at any state of the tide.

The last stone has been laid of the Wolf Rock Lighthouse, off the Land's End, Cornwall. More than seven years have passed since the work was commenced, during which time 1736 hours 50 minutes (less than 30 working weeks) were all that could be spent on the rock, great danger being even then often encountered by the workpeople. The lighthouse is as solid as the Eddystone, from which it differs little in form. The light, which is to show alternate flashes of white and red, will be 110 feet above highwater-mark.

JAMES THORNE.

NOTES ON CO-OPERATION ABROAD.

Co-operation, according to Mr. Morier, "may be described as the child of Socialism rescued by the economists from the dangerous custody of its parent, and brought up in strict accordance with the orthodox tenets of economical faith." The fact is undeniable. The founders of the Rochdale stores were disciples of Robert Owen, and the rules were copied from those of an earlier and unsuccessful effort of some Manchester Socialists. In France the earliest of the working-men's associations—that of the "Bijoutiers en Doré," established in 1834—was the result of the teachings of M. Buchez, one of the most distinguished of St. Simon's disciples, himself the founder of a sect of Christian Socialists, and a firm believer in the economic value of the principle. "Daughter of M. Buchez," says M. Duval, "the Jewellers' Society of the Rue Nazareth is the granddaughter of St. Simon." To the Socialism of Fourier was due the foundation of the Society of Beauregard and the Agricultural Union of Sig. At Condé-sur-Vesgres, Fourier's first phalanastery was to have been built; from want of funds it was never erected, but the "Société ménage," which occupies the land, has turned the desert of 1832 into a pleasant and well-cultivated agricultural domain. The official name of this society (La Colonie) indicates its origin. M. Duval tells us, that at the Familistery of Guise "the portraits of Fourier and Considerant are the only ones that adorn that palace of workers."

In Germany, as early as 1845, Professor F. A. Huber was advocating co-operation. Politically what we should call a "Tory of the Tories," in matters of social reform he went far beyond the most Liberal of his countrymen. Schultze was one of the "Left" of the Prussian Assembly, but this did not prevent their co-operation in advocating the principles of association as the workman's means of escape from poverty. The co-operative movement in Germany may be said to be the result of the wisdom and foresight of Herr Schultze, seconded by the efforts of a small number of farseeing economists. It was no blind experiment, no leap in the dark, but a carefully-studied attempt at solving the industrial problem as it presented itself in Germany. Nor was there anything in the scheme that warred against the rules of the most orthodox political economy. On the contrary, Herr Schultze was a distinguished economist, and the most successful of the opponents of Lassalle the Socialist, whose eloquence and fearless port gave him great influence amongst the working-classes.

Not only were the Socialists bitterly opposed to the method of self-help by the people, but the Government was jealous and unfavourable; and for a long time the associations were not recognised, and had no legal status, until 1867, when the bill that gave them protection passed through the Prussian Parliament. Success had at last disarmed hostility.

The first experiment of Herr Schultze was tried at his native place, Delitzsch, a little German town, having about 6000 inhabitants. In 1849 a loan institution was founded there, which, like our earlier

savings-banks, had an element of charity acting like a blight upon its usefulness. In 1852, when Herr Schultze-Delitzsch undertook its reorganisation, it had 30 members, and lent 827 thalers in the year. Worked by the wise system then inaugurated, its business has steadily increased; and in 1865 it had 514 members, and granted loans to the amount of 92,035 thalers.

But what are the objects of this union and its numerous imitators? In production of any sort there are necessary capital and labour. How shall the labourer procure capital? "No one can save the worker from poverty except the worker himself." Charity will do him no good, but only serve to demoralise him. By two methods only can he acquire capital—by saving or by credit. The first is in most instances impracticable to any useful extent; and, under ordinary circumstances, the second is equally so.

"When hundreds of working-men, individually poor and without credit, each pledge their personal responsibility and the produce of a mutual assessment, which they impose upon themselves, they acquire a collective credit, and can easily procure capital, which they borrow as a society, and then lend to those members who may need it. Such is the Society of Mutual Credit. In time, as the members pay a higher rate of interest than the society, and as the subscriptions accumulate, a fund will be formed which will make it unnecessary to borrow outside the society, and will produce for each member an interest proportionate to the amount which he has contributed. From that moment these workmen become capitalists and independent, or, at least, are on the road to independence and fortune." These words of M. Cherbuliez contain a very clear exposition of the principle on which the loan-banks are organised; but it will, perhaps, be as well to enumerate the most salient features in the rules laid down by Herr Schultze-Delitzsch for their guidance.

The funds consist, first, of the corporate property of the association; and, secondly, of the members' shares. The capital is derived from the entrance-fees and subscriptions of the members, and from loans borrowed under the collective guarantee of the association. They are entitled to vote on all resolutions of the society, to elect officers, and to receive loans from it, so far as the funds will allow. They are under an obligation to contribute towards the formation of a share at least five silver groschen monthly, to pay an entrance-fee of one thaler each, and to undertake, jointly and severally, the liability for the money raised to carry on the business of the association. The share of each member is fixed at 40 thalers as the maximum. Shares may be paid for either at once or by instalments. Until the share has been paid up in full, the dividends accruing on the part-payment shall, at the end of the year, be credited to the shareholder in a separate account, with the instalments paid up by him towards his share. A reserve fund is also provided for. The interest charged to the members is 8 per cent., which is deducted at once from the loan; and if the repayment is delayed, 10 per cent. is charged. Money is borrowed by the society at 4 or 5 per cent. Section 9 provides for the division of the profits after all the expenses, &c. have been defrayed. The amount of the loan made to members is

regulated by the state of the society's funds, but a maximum of 1000 thalers (150*l.*) is fixed. The terms of repayment are not, as a rule, to exceed three months, but it may be prolonged by the committee of management. A 40-thaler shareholder may borrow 60 thalers without security; beyond that amount he must give security, either by sureties or by a pledge. Members leaving, receive the amount paid up on their shares, and the dividend for which they already stand credited; and after two years they can claim to be relieved from all liabilities. The last rule is a strange one to have been framed by a lawyer. It provides that all difference of opinion as to the interpretation of the rules shall be decided by the vote of the majority, and precludes any member from taking legal proceedings in regard to such difference of interpretation. We have in this brief outline omitted the rules relating to the officers and their appointment, and also some minor regulations, all conceived in the spirit of the above.

Herr Schultze-Delitzsch (who was also instrumental in establishing many co-operative societies, both of production and of consumption) gave a large amount of time and labour to promote these banks of advance; and in 1859 he had "called into life 80 credit associations, comprising 18,000 members, and doing a yearly business to the amount of 4,000,000 thalers." He is now "counsel" to the United Co-operative Association, which includes co-operative societies of every nature. The remuneration he receives is "inconceivably low," and is paid out of the net profits, so that those which do not realise any net profits have the benefit of his assistance gratis.

We copy from an article in the "Independance Belge" (Sept. 10, 1869), the following particulars of the present state of the co-operative movement in Germany, derived from the report of Herr Schultze-Delitzsch on the operations of 1868:—The number of societies of consumption had risen from 199, in 1866, to 558 in 1868. Seventy-five of these societies had, in the aggregate, 33,656 members, and did business to the extent of 2,124,121 thalers. The progress and security of some of the societies have been endangered, because they have not in all cases adhered to the rule of buying and selling for ready money only, and of allowing the customer, whether member or not, a share in the profits. In Brandenburg, Silesia, Saxony, Würtemberg, and in some parts of Austria, societies are being formed, and are in communication for the formation of a general German Union of Societies.

Agricultural societies, for the purchase of seeds, manures, implements, &c., are on the increase; there are now 36 in Rhenish Prussia. There are 57 workmen's societies for the manufacture of goods. The workmen have become gradually convinced, that to found a society of this sort, and to conduct it to prosperity, it is necessary not only to unite the capital needful for the making and sale of the goods, but they must also be able to count upon business knowledge, upon the true spirit of co-operation, and the honesty of the management. So they do not hasten so much to open these establishments, but wait for a favourable opportunity. The loan-banks continue to increase. There are now 1558 (675 of which are in Prussia, 418 in Austria, and 288 in Bohemia): 666 of these had, in the aggregate, 256,337 members. With 10,231,457 thalers, their pri-

vate capital, and with 33,709,037 thalers of borrowed funds, they made advances to their members to the extent of 139,247,793 thalers.

The number of co-operative societies of all sorts in Germany may be stated as 2600. They have 1,000,000 of members, and last year transacted business to the extent of 220,000,000 thalers. Their private capital is 15,000,000 thalers, and 42,000,000 thalers of borrowed money. The large workshop system has not yet absorbed all the German trades, and a good portion of the industry of the country is carried on by mechanics working in their own homes, and generally with little aid save that supplied by their families. In Germany, as elsewhere, drunkenness and improvidence amongst the labouring classes are the greatest bar to their social wellbeing.

This movement, the result of the action and influence of one man, cannot fail to be productive of great moral results. It impresses upon each member the fundamental doctrine of self-help—the grand truth that, socially, politically, or religiously, each must "work out his own salvation." It's motto is, "Each for all;" and there is nothing about it of that mistaken charity which deadens every motive for self-exertion. The enormous sum of twenty millions sterling, lent to that class which otherwise could not have obtained credit, except on exorbitant terms, is lent not by the State, not by the aristocracy, not by the middle-class even, but by working-men to working-men; and the mere fact which these figures tell is full of hope for the future of the German people.

The butcheries of the battlefield have hitherto formed the subject of the poet's song, and the historian's grave narration. The men whose hands were red with the blood of their fellow-men have been exalted as heroes, loaded with honours, and held up to the admiration of each succeeding age. But "peace has her triumphs;" and surely it is nobler to give bread to thousands of men, than to drench the shrinking earth with their blood! Surely it is greater and grander to feed the hungry and clothe the naked—to fill happy homes with songs of love and peace—than to make them desolate habitations of woe, filled only with the groans of the widow and the cries of the fatherless! Nobler than the warrior's exploits, and worthier far of glory's laurel-wreath, are the actions of those social reformers who increase the wellbeing of their nation and of the world.

The society of "Credit au Travail" was organised in 1864. A writer, as late as October last year, says of it: "The object of the society, as expressed in its articles of constitution, is to furnish credit to existing associations, to aid in the creation of new ones, to encourage the development of the principles of solidarity and co-operation (*mutualité*), so as to render credit accessible to workers in *all branches* of human activity—in teaching, and in the sciences and arts, as well as in agriculture, industry, and commerce. Compared with this grandeur of purpose, the means seemed to most people laughably small. The capital consisted of 20,120 francs, of which only 4,082 francs were paid in, subscribed by 172 shareholders. To-day the society has 2000 members, and controls a capital of more than 1,000,000 francs. It has advanced loans to more than fifty co-operative associations in Paris and other towns. It is the banking agent, and acts as savings-

bank, for 100 working-men's societies. It discounts the paper of co-operative associations, and of its own members, to the amount of about 700,000 francs monthly. It negotiates *workmen's* paper, for sums of from 10 to 100 francs, to the amount of 60,000 francs a month. Its aggregate monthly operations are represented by 300,000 francs. It appropriates from 4000 to 5000 francs yearly to the propagation of the doctrines and practice of mutuality and association in the departments. Money was only to be lent on the joint engagement of three persons.

Its prosperity led to imitation, and the "Caisse d'Escomptes des Associations Populaires" was founded by the middle-class Liberals. Democrats and Orleanists having both decided to encourage these co-operative associations, it was necessary for Imperialists to follow suit, and so arose the "Caisse des Associations Co-operatives," under the special patronage of the Emperor. Neither of these two appear to have exercised any great influence on the movement.

Speaking of the "Credit au Travail," in the early part of last year, M. Rieder said: "This is to my eyes the establishment which best responds to the general wishes, the only one whose laws may be copied literally by every friend of co-operation who wishes to lead the workmen to unite for their mutual benefit."

This bank failed in December last. "Many persons had come to personify in it co-operation itself, and the result has been very bad—both as to indifferent outsiders, who have seen in it but a demonstration of the impotency of the co-operative idea; and as to the societies themselves, many of which were either creditors or debtors to the bank. Since then, no association has been founded in Paris. Fortunately, the blow has not been much felt in the rest of France."

The causes assigned for the failure we have not heard. Probably the conjecture of the Rev. Mr. Molesworth will not be far wrong; he says:—

"The failure of the 'Credit au Travail' may be very easily accounted for. The institution which they formed was rather a loan-society than a bank; and as they were animated by a spirit of the most enthusiastic and generous propagandism, I have no doubt they made their loans very liberally, but somewhat too rashly; that they established societies where the elements of success did not exist, and led others to lean on their assistance which could not be sustained, or which would have done better without such support."

There were, in 1866, over three hundred loan-societies in France, but statistics of their operations do not appear to exist.

Co-operative loan-societies exist in the Celestial Empire. There are no means, so far as we know, of ascertaining the number of these associations, or the extent of their operations. The part for October, 1868, of "Notes and Queries on China and Japan," edited by N. B. Dennys (a valuable and learned periodical published at Hongkong, and circulating chiefly in the East), contains an interesting article, signed "A. L.," giving an account of the mode in which these societies are conducted.

The banks of resistance, as they were termed (*i.e.*, strike funds)

often formed a secret portion of the French friendly societies, and did not always fall under the notice of the police. In 1864 the law recognised the right of combination amongst workmen. The new liberty has been used much more freely than is pleasing to many capitalists. Strikes were very common in 1866-67; the most noticeable, perhaps, was that of the bronze-workers of Paris. The strike or rather lock-out, was an attempt on the part of the masters to destroy a trades-union of 3000 members. The workmen held their own successfully; after a month's stoppage, the masters gave way, and opened their workshops unconditionally. But the right of combination is very jealously regarded by the authorities; and the tailors' union, who were on strike in Paris, felt their vengeance for assembling in public meeting!

Similar associations exist in most European countries. There are nearly four hundred of them in Italy.

The society of "Bijoutiers en Doré" owes its existence to the teachings of Buchez, who, in 1830, by public lectures and in the society of the "Friends of the People," explained his scheme for the formation of a workman's association. His plan may be thus briefly stated:—Each member of the association should perform day or piece-work, and be paid according to the custom of the trade; and the excess of price over cost of production should be reserved until the end of the year, when it was to be divided—5 per cent. being reserved for the formation and increase of a common capital, and the remainder divided among the workmen according to the nature and amount of their work. The capital of the society, formed by the tax of 5 per cent. of the profits, with the view of preventing the dissolution of the society, was declared inalienable. Buchez laid great stress upon this point, and said: "The foundation of the social capital, inalienable, indissoluble, is the important fact in association; it is that by which this class of society creates a better future for the working-classes." The society was not to employ for any long period the labour of persons not members. Such was the scheme proposed by Buchez, in 1831, for a projected society of joiners, which, for want of capital, was never formed. This difficulty of the workman in procuring capital also struck Buchez, and he proposed that the State should form banks of credit, or that some benevolent individuals should organise such institutions. His proposal for a bank fell unheeded; and probably his other scheme would have remained a theory also, but for the courage of a workman, M. Leroy, who, in 1834, induced a few of his companions to join him in founding the "Société des Bijoutiers en Doré." They had many difficulties to contend with. The state of the law was unfavourable, and until 1843 their statutes were only provisional. A modification was also made as to the amount placed in the inalienable common capital, a portion being reserved as the personal property of the associate, and to receive interest whilst in the common bank.

From M. Veron we learn that the society has four branches, a capital of more than 100,000 francs, does a large business, and divides amongst its members about 20 per cent. yearly. The same writer attributes the success of the association, and the willingness of the

members to remain poor men whilst the society increases in riches, to the religious character of the associates. They are a society of saints, and make their work a portion of their religion. Alas! that this should be accounted a singularity in this nineteenth century of Christianity!

A Socialist experiment was tried in 1830 by M. Everat, one of the first printers of Paris, and the society which he formed soon became famed for the beauty and excellence of its workmanship. "Nothing was wanting to this establishment," says M. Reybaud—"neither the favour of the public, nor that of the booksellers; they had continued appreciation, and a choice, so to speak, of the best work in Paris. Famous for their production of books of luxury, they could obtain almost any price, and in place of receiving could lay down the law . . . Ah, well! this was not enough to ensure the continuance of the establishment, and after existing some years it was dissolved."

Of the causes which led to this dissolution, M. Reybaud confesses his ignorance, but he himself attributes it to the equality of wages which was one of the rules of this society. The tailors' workshop at Clichy, organised upon this principle by Louis Blanc, also contained this regulation, and yet the experiment was not an unsuccessful one. After the conclusion of the government contract, the picked men of the establishment formed a fresh society, with a capital of 3700 francs, derived from the profits of the former trial. This society, in the hope of evading the consequences of the feeling against the doctrine of Louis Blanc, abandoned the system of equality. "It was no longer," says Reybaud, "the famous maxim, 'To each according to his needs,' which, coming from the Luxembourg, had had the workshop of Clichy for its place of trial; it was a return to plain common-sense, which says that all work should be rewarded according to its value." We will now let M. Blanc narrate the end of the society which had thus reconciled itself with true principles: "After courageously struggling for some time, the association was compelled to stop; and its moving spirit, poor Berard, soon after died, his feeble constitution completely broken up by the severity of his exertions."

The experiment of 1848, owing to the peculiar circumstances of the case, cannot be said to have at all set at rest the questions it was intended to solve. Taking it out of the hands of the theorists, it was determined to apply the test of actual experience to the doctrine of association. For half a century Socialism had denounced competition, and preached the association of labour. The most popular, honest, and eloquent advocate of Socialism in 1848 was Louis Blanc, and it was hoped by the people that he would have been appointed Minister of Labour and Progress. This did not take place: he was a member of the Provisional Government, but the new office was never created. He would have brought to his task energy, popularity, eloquence, and, above all, faith. His doctrine may be summed up in his own formula: "From each, according to his abilities; to each, according to his needs." The society at Clichy, which he organised, and which employed above a thousand of the tailors who had been walking Paris streets in search of work, in making the uniforms for

the national guard, certainly achieved for a time a large amount of success. We have already seen its downfall, after it had abandoned its Socialist errors. By the law of the 3rd of July, 1848, a credit of 3,000,000 francs was opened at the Ministry of Agriculture and Commerce, to be distributed in the form of loan amongst the manufacturing co-operative associates, composed of either workmen alone, or of masters and workmen.

Only nine of these societies had weathered the storm, and were in prosperity, in 1855. In 1864, four only remained—the "Bijoutiers en Doré," the "Menuisiers en Fauteuils," the "Tailleurs de Limes," and the printing society known as Remquet & Co.

The general results of this loan can only be described as disastrous. The distribution of money may be thus stated:—

	Fr.	C.
30 Societies in Paris	890,500	0
26 Societies in the Departments .	1,700,000	0
	2,590,500	0
Expenses, &c.	10,024	49
Not allotted and rescinded . .	399,475	51
	Fr. 3,000,000	0

Eighteen of these societies dissolved in the first year—that is, as M. Reybaud has said, at the end of the first campaign a third of the army was *hors de combat*.

The history of Remquet & Co. is an instructive one. Twenty working-printers joined together, and with a State loan of 80,000 francs purchased the plant, &c. of the house of Renouard. It was not without difficulty that they obtained this loan, and only on condition that the duration of the society should be limited to ten years, and a quarter of the proceeds was to go yearly towards the liquidation of the loan. The society, having full and well-founded confidence in the integrity and ability of their founder, M. Remquet, invested him with managerial powers of the widest nature. "To formulate in the clearest manner the powers of the manager, they recognise that he possesses all those of a master, except in that which has regard to the fundamental constitution of the society." This is a noble example of faith in one of their own order, and is the more noticeable, since a want of thorough confidence in their leaders has had so much to do with the failure of many working-class projects of all sorts. And by this generous spirit they placed at the head of affairs one whose daily-increasing experience served to strengthen and widen the basis of their prosperity; they secured that singleness of purpose and aim which is so difficult to be attained in associated enterprise, and the want of which is the cause of many failures. In 1858, when the society was wound up, after paying off their debt to the State, they had left 155,000 francs—giving, on the average, between 10,000 and 11,000 francs for each member. The lowest was 7000 francs, and the highest 18,000 francs.

The "Brotherly Association of Fileworkers" commenced in August, 1848, with forty members, plant worth 2280 francs, and 500 francs in money. It borrowed from the Council of Encouragement 10,000

francs, and, like the others, was organised *en nom collectif*. The rules are carefully framed to secure at once full power and oversight for the manager, and full justice for all the workmen. Thus, there is a rule that all work spoiled, or not done according to order, shall be submitted to the committee of the society, who shall judge the matter; and *for the perfect liberty and impartiality of the members, the name of the workman who has done the work shall remain unknown until after their decision has been arrived at.* In 1864 they were in full prosperity, with nineteen members and a business of 12,000 francs; they employed also twenty-nine auxiliary workmen, mostly on piece-work, and had a capital of about 12,000 francs.

With the four exceptions named, the societies which participated in the State Loan of 1848 were unsuccessful. Nor is it to be wondered at, if the circumstances are considered. The intervention of the State in favour of a special class is always to be deprecated, and in matters of trade and manufacture the wisest policy a Government can pursue is to allow them the utmost latitude in the choice of methods of working, and the utmost freedom in carrying them out. The idea of a scheme for the abolition of capital, worked out at the expense of capitalist taxpayers, appears evidently unjust.

But it is time to turn from this illfated experiment, and examine the history of some workmen's associations which had courage enough to abstain from the general scramble for a share of the Luxembourg Loan. We commence with the pianoforte-makers. Five hundred and fifty of them, masters and workmen, formed an association, and wished to borrow 300,000 francs from the State. The loan was refused, and when they reduced their request to 140,000 francs, they were equally unsuccessful, and the society dissolved—never having had, in fact, any real working existence. But sixteen of these men determined, by self-help and industry, and without State aid, to do what the 550 had lacked the courage to attempt. Some of them had been small masters, and were able to bring into the concern some tools and materials. This was done to the value of 2,000 francs, and then with great difficulty, and with the aid of some workmen-friends outside the undertaking, they managed to scrape together 229 francs 50 cents, with which they began work on the 10th of March, 1849. They found all their capital swallowed up by preliminary expenses, leaving not a farthing for wages. The times were highly unfavourable—peaceful music was at a discount; all ears were on the stretch, expecting to hear the braying of trumpets and the beating of drums. For the first two months, not one of the workmen received any wages at all! For two long months they lived without any return for their toil, and worked as only workmen can work. Their household furniture and clothes went quickly to the *mont-de-piété* during these hard times.

They managed to live—as men live through the privations of a besieged city, surrounded by foemen on every side. A happy day for them was the 4th of May, 1849, for then they received payment for their first contract. Each man received 5 francs of profit, besides his wages; and there still remained enough to provide a friendly and

frugal feast, at which the members and their families celebrated this first dawn of success in fraternal meeting. The expense for each family was 32 sous. In the course of this month they entered into a contract which ensured them, at all events, from starvation. This was an order for a piano given them by a musical baker, on condition that they would receive the price in bread! So they fought bravely on, and gradually the care and excellence of their workmanship attracted customers; and they were able to increase their scanty salaries, and to give to each member, in the form of wages, the pay that good workmen received elsewhere, besides constituting a reserve fund for the further development of their business. Nor did success make them callous to suffering, for we find a generous provision that those who are ill shall receive their working wages, and a further allowance of 10 francs weekly. In 1863 they had a large manufactory of their own, with steam-power, and the best tools and appliances that could be procured. Their capital was 163,000 francs, and their business transactions over 6,000,000 francs.

The "Société des Ouvriers Maçons" started in 1848 with sixteen members. They were refused a share of the State loan, for extreme Socialist views, and managed to sail through the stormy reaction of 1851. Next year they had a complete remodelling of the concern. Working members were to invest 2000 francs in the association, payable in instalments amounting to 10 per cent. of the wages received. The society also invited the subscriptions of working-men who were not employed by it, and divided the profits, in the proportion of 60 per cent. to labour and 40 per cent. to capital. The rate of wages paid to the working members was regulated by the price of labour in the trade generally. They started anew with seventeen members, and 364 francs capital. This rose to 4521 francs in 1853, and to 17,000 francs in 1854. In 1857 they had 100 members, did business to the extent of 231,461 francs, with a profit 80,000 francs; in 1858 the profits, after 30,000 francs had been placed in the reserve fund, was 100,000 francs on a capital of 254,000 francs. The society has large premises in the Rue St. Victor, and above a score of workshops in different parts of the city. In 1860 they had 107 members and 365,000 francs, and this notwithstanding a loss of 4000 francs which they had encountered. They have executed some important public works, and have been employed by MM. Fould, Rouher, Emile de Girardin, and other notabilities. In 1867 they undertook, by contract, the erection of a new railway-station in Paris, which was estimated to cost 2,000,000 francs. The number of members in 1867 was eighty-one, of whom twelve were persons interested only as capitalists; the remainder were workers and shareholders. They employ many auxiliary workmen in the fulfilment of their contracts, who have no monetary interest in the success of the society, but can, after a short period of probation, become members on the payment of 40 francs, and further contributions to the extent of 10 per cent. of their wages. Each shareholder would receive in 1866, "in addition to his wages, a bonus of about 5*s.* 9*d.* for each day he had worked, and 28 per cent. upon the capital he had invested."

Mr. Ludlow gives an extract from the report of the managers,

read at the meeting of the society on the 21st of June, 1860, which is well worth quoting:—

"If it be a duty for man to act well, it is also a duty for those who surround him to acknowledge it. Assuredly, a good man has no other incentives than the attraction of truth, and the inward satisfaction which he experiences; he works not in the hope of a reward, of a distinction. But is it not quite just that sympathy and gratitude should not fail him? . . . Our rules give us the right of blaming, fining, excluding those who forget themselves; why should they not impose on us also the duty of rewarding those who act better than others, and are more useful?" They then propose to give tokens of sympathy and gratitude to those who shall, relatively, have acquired most instruction, who have contributed most to the improvement of the association, and "to him whose conduct shall most approach to the true type of man in association—that is, who shall have led the most moral, brotherly, self-devoted life."

Another instance of devotion to principle, in spite of the rudest tests, is afforded by the "Société des Ferblantiers-Lampistes." Like the pianoforte-makers, they had their origin in a much larger society, formed in the hope of sharing in the Government loan, and which, disappointed in that hope, had soon dissolved. Forty lampmakers were found hardy enough to commence operations, in a small place in the Rue du Faubourg St.-Denis, at a rent of 500 francs. After the inevitable preliminary expenses had been paid, there remained for the working of the society the sum of 10 francs; and the state of trade was such that, for many weeks, the only order they received was for a lamp, *price twelve francs*. They commenced in January with forty members—at the end of the year there remained only three. However, their prospects were improving, work came in, the members increased to fourteen, when an unexpected disaster left them once more penniless. They found that they must pay the penalty of laying up for themselves treasure in this earth, "where thieves break through and steal;" and but for the friendly aid of the other co-operative societies, who subscribed between 300 and 400 francs for the unlucky "ferblantiers-lampistes," they would certainly have been ruined. It is honourable to all parties that this subscription was only accepted as a loan, and was scrupulously repaid to the last sou. In 1855 the society was wound up, in order to be reconstructed on a more solid basis. Prosperity had crowned their industry and intelligence; and the society, started six years previously with borrowed capital, after paying all debts, had a sum of 74,891 francs left for distribution amongst the members. The new society contained forty-six members. The success of the society appears to be ensured. In 1864 its capital was 90,000 francs, and its business varied from 110,000 francs to 125,000 francs.

Parisian workmen have given us successful examples of associated labour amongst pianoforte-makers, lampmakers, filemakers, jewellers, chair-turners, furniture-locksmiths, lastmakers, spectacle-makers, builders, &c. Nor are these societies confined exclusively to Paris, although they have chiefly flourished there. The co-operative movement took deep root in Lyons during the year of revolution (1848); the

stonemasons, chairmakers, silk-workers, wood-carvers, joiners, and many others formed associations, some of which were exceedingly prosperous.

M. Duval has narrated, with all the charm which his style imparts to these subjects, the story of the trials and successes of the co-operative society of Beauregard, and the story is as interesting and as instructive as that well-known one of the Rochdale Pioneers. Nay, more so, for the difficulties overcome were much greater even than those which threatened the prosperity, and even the existence, of the old weavers' shop in the earlier stages of its progress. In 1845 it was proposed to establish a co-operative grocery-store at Vienne-sur-Isère, but the prefectal authority, which has always been in France bitterly opposed to these associations, forbade the scheme, which was consequently abandoned. The workmen of Vienne awaited their opportunity, and when 1848 brought more of personal freedom, they established their society, and opened a small shop in an obscure street, where the goods which the society bought wholesale were retailed to the members. Their business prospered greatly, and at the end of a few weeks they had to remove into a better shop in a more respectable quarter of the town. In September 1851 they bought the farm of Beauregard; but three months later came an unexpected stroke of adversity, which (nominally) destroyed them. They received an order to close their store and sell their stock, from General Castellane, the commander of the army at Lyons, which was then in a state of siege.

Against this harsh sentence they addressed a petition to the General, wherein they detailed the evils to which, as poor men, they had been subjected, in the way of adulterated food, false weights, the temptations of credit, and the efficient remedy which they had found for these evils. This petition, frank and manly in its tone, was of no avail; and a similar one, addressed to the Minister of the Interior, remained also unnoticed. The enforced winding-up of the concern took place, and it was found that they had managed their affairs so well that each shilling share had increased tenfold. And, to show that their hearts were in the right place as well as their heads, these honest men, persecuted by the military power of the Republic one and indivisible, gave 600 francs to the charities of their native town, besides performing similar generous actions to some of their most embarrassed debtors.

The municipality and the public were much interested in the fate of this society, which managed to retain possession of the little farm at Beauregard. Here, on the recommendation of Dr. Henri Couturier, they opened a *maison de santé et de sevrage*. From this beginning they gradually embarked in more extensive undertakings, although, for fear of exciting the attention of the authorities, they did not reorganise their grocery-store. They are now manufacturers of cloth, making 60,000 métres of it yearly. They are also large coal merchants. In 1855 there was a general attempt on the part of the authorities to foster cooking establishments like that at Grenoble. One was instituted at Vienne, and the municipality gave 2500 francs in aid; but the affair did not command the public confidence, and in two years was on the verge of bankruptcy. Under these circum-

stances, the town authorities proposed to the co-operators that they should take charge of the "Société Alimentaire." As a commercial undertaking there was very little profit to be looked for, as it was nearly ruined. But since 1852 the Society of Beauregard had been living on sufferance; they had not applied for an authorisation, declaring that they were simply a commercial partnership: but their status was a doubtful one. If they took the dining-hall from the town, their corporate existence would be recognised in their power to conclude such a contract. In short, the bargain was struck, and by care, attention, and honesty they were able to save even this hopeless business from destruction, and at the end of 1865 it yielded a profit of 3000 francs. The profits of the "Société Alimentaire" are divided thus—30 per cent. to the servants employed, 50 per cent. to the customers, 20 per cent. to capital. The little farm has increased to six hectares; and there about 200 children grow up amid the country air, and under the care of nurses appointed by the society. On the Sunday their parents come to see them, and to enjoy the fresh air and beautiful scenery of the place, which has well earned its name of Beauregard. They have a library, a school, a lecture-hall, in addition to their commercial undertakings. On St. John's Day they hold their fête, to which they invite all the notabilities of the district: 2400 cards of invitation were issued in 1865. The scene, as described by M. Duval, is one of pastoral simplicity and beauty. The great men mix freely with these artisans, who have vindicated the nobility of labour, and the great ladies do not hesitate to join in the dance with the young workmen of Beauregard. It is more like a verse from some idyll of the golden age than an episode of French life under the Second Empire.

Some of the provincial associations have attained large proportions: thus the "Société des Tisseurs," at Lyons, has 1800 members, and the "Association des Rubaniers de St. Étienne" has 1200 members and 1,200,000 francs capital. M. P. Hubert-Valleroux estimates the number of these societies at 100 or 120. In Spain, Italy, and America there also exist societies of production. A co-operative experiment in agriculture was made by Von Thünen, a much-esteemed scientific farmer and publicist, with gratifying results.

The Co-operative Stores, which are so numerous and healthy in England, do not flourish abroad in the same degree. In 1832, at the instance of two benevolent cotton manufacturers, a number of the workmen of Guebwiller united themselves together, in order to obtain bread cheap and good. The firm of Schulumberger & Bourcart, to whom we have just alluded, put the matter in a fair way for trial by building their workpeople a bakehouse. The men paid their weekly subscriptions, bought flour wholesale, and made their own bread. In 1839 they had sold 452,181 loaves, at 12½ per cent. below the market-price, and had besides in their bank 13,000 francs. The society added to its bakery the sale of other articles of daily necessity—in fact, became a co-operative store of the English fashion. They have joined to it a feature yet unknown to our stores, a free loan-society, but of its rules or operations we have learned nothing. There is a very similar association at Dieuze.

At Paris stores do not seem to be much in demand. In 1866 there were 20 store societies in Lyons, having about 3000 members and a capital of 350,000 francs; the number is now over 25. The number of these societies in all France is about 300.

A co-operative society of a very curious nature is to be found in Paris, and from the singularity of its plan of operation deserves a brief notice, although scarcely likely to have many imitators. This is the Society of the United Shops, whose premises, which have cost more than £40,0000, form a magnificent pile of buildings in the Place du Château d'Eau, and contain depôts of about 150 trades. A stated portion of the price paid by the customers of the United Shops is set apart for investment in government bonds, and thus in process of time, varying from two to fifty-nine years, the purchaser is entitled to get back the exact amount he originally expended. This clever method, by which the buyer has all his purchase-money returned, and the seller yet makes a handsome profit, is the invention of Messrs. Alexandre & Fils, the harmonium makers.

In Italy the writings of Professor Francesco Vigano have had much to do with the extension of co-operation. Another friend of the movement was the late Guiseppe Dolfi, a man of great honesty and courage, who had his share in the liberation of Italy. There are not only stores, but people's banks, manufacturing societies, and popular libraries.

In Denmark the attention of a benevolent pastor was drawn to the subject of co-operation, and the accounts which he read in the "Co-operator" led him to incite his compatriots to follow the example which had been set them by the working-men of Lancashire and Yorkshire. Accordingly, Pastor Sonné, in a series of conferences, explained the objects and constitution of the English co-operative societies, and formed at Thisted, in May 1866, a store-society of 80 members. In 1868 the members had increased to 190; they had paid 5 per cent. to capital, 6 per cent. on purchases; they had a reserve fund, and the increase of their business had rendered necessary their removal to larger premises, where they have also a library and news-room. At first the Thisted society were allowed 10 per cent. on their wholesale purchases from the bakers; but these acute tradesmen, thinking that the co-operatives could not do without them at all, lowered this rate, first to 5, and then to 2½ per cent. Upon this the co-operators redressed their own grievance by adding a bake-house to their other possessions. In the winter they were able to lend their members money on the paid-up shares, and thus carried them over a season of want of work.

The success of this society, and the writings of Pastor Sonné, have led to the formation of several Household Associations, one of which was opened in Copenhagen, in 1868. There are now about 300 co-operative societies of all descriptions, with 2500 members and a capital of 1300*l*. The co-operators are sufficiently strong to support a monthly magazine (*Arbeideren*), published at Copenhagen since the commencement of 1868.

Mr. William Pare, F.S.S., whilst in Norway in 1868, desirous of bettering the condition of the working population with whom he came

in contact, assembled the workmen of the Eidsfoss Ironworks, explained to them the nature and objects of co-operative stores, distributed amongst them some of the writings of Sonné, and in October they opened a store, which has since made most encouraging progress. Here, as elsewhere, a preliminary difficulty was the credit system; most of the people were in debt to shopkeepers, from whom they, there as elsewhere, not unfrequently had to buy bad food and dear. However, at Mr. Pare's suggestion, the better-off among them paid off the debts of their poorer brethren, the repayment of the money being secured to them by a lien on the future profits of the store. Mr. Pare also set apart for them at the works a reading-room, which he supplied with Danish co-operative literature. The progress and resent position of the society is shown in the following paragraph :—

"Capital, 134*l.*; business done in seven months, 354*l.* It has 51 members, all connected with the ironworks, most of whom have been rescued from debt by the operations of the society. They have traded strictly for ready-money both in buying and selling; and when, in April, they took stock and balanced their accounts, they found, after paying all expenses, and allowing for depreciation, they had made a profit of about 21*l.* on the seven months' transactions. This has been divided according to purchases, but has not been drawn out, each member's share being placed to his credit in the capital account. The Eidsfoss Co-operative Society is the first successful attempt of this kind in Norway, an abortive one having been made some two years ago at Kongsborg, the seat of the government silver-mines. The example of Eidsfoss has, however, induced the establishment, under favourable auspices, of a society in the parish of Hof, about seven miles from Eidsfoss, and co-operative societies in other parts of Norway are in course of formation."

At Norköpping, in 1860, was founded the first Swedish Working Men's Society. In the next seven years it expended 1200 rix-thalers in aiding its sick, opened a library, and built, at a cost of 77,000 rix-thalers, a hall wherein to hold its meetings, and a number of the members started a co-operative cloth-factory. The Gothenburg Society, in 1866, was established on still broader principles. All persons wishing to consider themselves workmen were eligible as members, and women were admitted on an equal footing with the "lords of creation." In April, 1867, they opened a store. They have now three stores, a library and reading-room, a building society, a people's bank, and a singing choir. It is as yet only an experiment, having had a year of great trial, but is expected to hold its own and prosper. These societies are becoming numerous, and support a newspaper (*Arbetaren*), the thirty-third number of which is now lying on our table.

In America and in the English colonies co-operative stores are probably not unfrequent, although the total absence of any general organisation prevents one from hearing of them except by accident. They exist at Chicago, Charleston, Lawrence, &c., &c.

The "Société Alimentaire" of Grenoble is another example of the fecundity of the co-operative principle. It owes its formation to M. Taulier, who in 1850 was Mayor of Grenoble. On his proposition, the town organised an alimentary society, gave it a building, and made

the necessary advances from the municipal funds. M. Taulier went to Geneva, to study the details of the society in successful operation there; a public subscription was opened, and a knowledge of the objects of the new institution was diffused among the population by bills posted on the walls. A committee of thirty-one members was appointed, who drew up rules for the guidance of the society, and the municipality, in addition to its former liberality, now undertook to make good the deficiency if the project failed. By the honesty, cheapness, and excellence of the food which it sold, the society speedily ensured itself success, and in 1852 freed itself from municipal patronage, and stood upon its own responsibility. The only subscription now required is the purchase of a card of membership, holding good for one year. This is charged 25 cents to outdoor, and 1 franc to indoor customers. On producing his card of membership at the wicket, the member receives, in return for his money, a jetton representing the amount he desires to expend. That, both as to cost and comfort, these large dining-halls are a great improvement is incontestable. The cost of living at them is thus given by M. Finot, a journeyman printer: "In the morning I take a soup, 10 cents; a quart of wine, 7½ cents; dinner—meat, 20 cents; wine, 7½ cents; bread, 5 cents; supper—potage, 10 cents; wine, 7½ cents." The total for the day may be stated thus:—

Déjeûner	17½ Cents
Dinner	40½ „
Supper	17½ „
Total	75½ „

There are some items in this recital which are of contested utility, but what a contrast it forms to the cost of living of the English workman!

In 1851, the society at Grenoble sold 882,874 jettons, representing 87,154 francs 9 cents; in 1856, they sold 1,310,715 jettons, representing 130,197 francs 65 cents. In 1859, the figures were 1,090,524 jettons, worth 112,511 francs 40 cents—a falling-off explained by the stoppage of the glove-making industry and the war in Italy, two circumstances which had drained the town of a portion of its population. The plan of selling by jettons is praised by the French economists as a means of inducing saving habits, and they say it is no uncommon thing for the wives of workmen to purchase these to the value of 25 francs at a time, thus providing to a large extent for the bodily wants of the household, and removing the temptation to drunkenness and dissipation out of the reach of their husbands. The Alimentary Society of Grenoble has not been without imitators in France and Italy, and the large English dining-halls probably owe their existence to its influence.

The application of co-operation to building, as a means of providing the working-classes with cheap and healthy houses, has been very successfully achieved in the "Cités Ouvrières" of Mulhouse. In 1837, when Professor Huber first saw Mulhouse, he thought it was about on a par with Glasgow or Manchester—that is, the Manchester of 1837. There was one additional element of misery at Mulhouse:

situated on the borders of France, it was the temporary home of a horde of nomadic vagabonds. The "Société Industrielle de Mulhouse" occupied itself with the task of improvement. In 1850, it considered the subject of the protection of the workman from accidents by machinery. The committee appointed were in favour of a law similar to that in effect in England; but the society did not endorse the views of their committee, but thought that the same object might be attained by the organisation of a committee of inspection, which should suggest to the masters the necessary precautions. This plan failed in practice. It was too benevolently inquisitorial. The society then offered a prize in competition for the firm that had most completely guarded their employés from the cruel chances of unfenced machinery. One firm alone, that of Dollfus, Mieg, & Co., appeared to claim it. But the agitation of the question has done good, and wise precautions against accidents are now in general use.

Another evil practice, which has ceased at Mulhouse, is that of working in relays day and night. No doubt, at the first sight, there appears to be every economical reason for keeping in continual motion the monster machines which do the work of to-day, for there is a great loss of power in their stoppage; but experience at Mulhouse, as in England, has shown that night-work and overtime is a fatal mistake. Not only is night-labour costlier, but it is worth less. "It is easy for a practised eye, in looking at a piece, to tell where night-work has commenced," said a manufacturer to M. Veron. In 1827, the society endeavoured to obtain legal protection and shorter hours for the children employed in factories; and in 1839, the law enacted that no children under eight years of age should be employed, nor should they work full-time until they were twelve years old. This was well, and would have produced good results if the Government had enforced it. But, by not appointing inspectors, they enabled the unscrupulous to set the law at defiance. As for the honest men, they were at liberty to prosecute their dishonest neighbours, and secure their conviction if they could. Meanwhile mammon was triumphant, and the "cry of the children," robbed of the pleasure and grace of childhood, barred from the flowers and the sunshine, bondslaves to the Moloch of greed, rose sorrowfully up to heaven.

The society did not lose heart at their defeat; they agitated the question unceasingly, and in 1848, by the aid of Baron Charles Dupin, they passed through the "Chambre des Pairs" a Factory Act very similar to that in operation here. Before this law could receive the assent of the other house, came the Revolution of February. There is, therefore, only the law of 1841, which there is no official machinery to enforce. In 1850, the society desired to found a superannuation fund (*Caisse de Retraite*) for the workmen, and with this object, they promised to every workman who would subscribe 3 per cent. of his salary an addition of 2 per cent. to the amount. They thought by this means to have stimulated the men to saving, and also to have protected them against the bitter poverty and dependence in which too many of the artisan class end their days. But in ten years there were only sixteen persons sufficiently farseeing, and sufficiently afraid of the evil

days drawing nigh, as to fall in with this offer. Nor are the reasons far to seek. If life were as certain as it is uncertain, our surprise would be greater. The good proposed was too much in perspective to effect habits of saving where all had previously been waste and improvidence. Still more important, the scheme did not appeal to self-respect, but had an air of charity and patronage from the employer to the employed; and those who know how the pride of the artisan revolts at the least suspicion of officious pity, will see in that fact alone sufficient cause for the failure of this well-meant scheme. Such was the place and the people.

Let us now turn to the building society. The first impulse to the formation of the "Cité Ouvrières" was the receipt of a translation of Mr. Henry Roberts's work on Improved Dwellings for the Working Classes, which was circulated by the French Government. The idea of a building society suggested itself to M. Jean Dollfus, and it commenced in 1853, with twelve shareholders and a capital of 1200*l.*; in 1860, the shareholders were nineteen, and the capital 14,200*l.* The State, having had under its consideration the necessity of providing better accommodation for the working-classes, authorised assistance to the extent of one-third of the entire sum expended. In effect, the State has given 12,000*l.* In return for this subvention, the society contracted to sell the houses at cost-price, and to let them at not more than 8 per cent. The shareholders' profits are limited to 4 per cent. The workman who wishes to become the purchaser of his own house has to pay in the first instalment from 12*l.* to 16*l.*, and the remainder in sums varying from fifteen shillings to one pound monthly. Interest is allowed on the small payments at the rate of 5 per cent., thus answering some of the purposes of a savings-bank.

An infant-school has been built, and has about 150 pupils. The houses vary in size, but are all of them an immense improvement on the horrible overcrowded hovels of former days. There are lodging-houses for the bachelors, and baths, washhouses, dining-rooms, bakery, &c., for the use of the establishment. In 1860 the society had expended 6,400*l.* on the erection of dwelling-houses alone. When Huber visited it, on a sabbath eve in 1858, he saw "men, women, and children walking in their gardens, or sitting on benches before the door, or in the shade of a tree laden with fruit, or in a shadowy arbour; in quiet talk amongst themselves, or with their neighbours over the low hedge, showing or looking after their self-grown vegetables, berries, fruits, and flowers; gathering a nosegay, or smelling at the roses, that were there in marvellous abundance; the children romping, many an old man enjoying quietly his book or paper, and, of course, pipe or cigar, and most parties preparing to sit down to their cup of coffee.

"Well, all this is certainly not very strange and wonderful in itself, and I hope you may have seen the like of it a hundred times; but then, I am sure, even as you saw it, you could not help rejoicing at such pictures and tokens of quiet peaceful home enjoyment. And then, probably, what you remember in that way were merely, as it were, one or a few instances here and there at a time. And there is

already the difference in favour of our *cité*, where you have hundreds of families enjoying themselves in that way. And then you know, or might learn from themselves, that most of them had but a short time ago—perhaps from one to three or four years—had no idea of such enjoyment, but only of that sort of revelling, the din of which broke in from afar into the quietness of the *cité*, as if to make us more sensible of it. And then there is something about most of those honest people, in the way they look at their house and garden, and pluck that rose, or bind up that shrub—nay, in their very walk or air—which bespeaks at once the *proprietaire*."

Straight streets, pleasant gardens, general cleanliness and comfort—such appear to be the characteristics of the "Cité Ouvrières" of Mulhouse. Nearly in the centre is a large square containing the public buildings, the bathhouse, reading-room, &c., surrounded by trees and pleasant lawns.

The example of the Mulhouse Building Society has not been without its effects. At Leipsic, Genoa, Paris, &c., we hear of "Cités Ouvrières." At Genoa a society was formed in 1864 for building purposes, its object being to supply each of its members with a healthy and well-built lodging. The society has built a large house, divided into fifty-four distinct lodgings, and has laid the foundation-stone of a second. It expects to supply all its members in six years.

Of the application of the principle of association to education, meaning by that wide phrase simply the teaching and diffusion of useful knowledge, there is not much to report beyond the gradual spread of popular libraries in France and Italy. These library societies are strictly co-operative, although most of them receive help either from the communal authorities, or from private liberality. M. Jean Macé, the author of the charming "History of a Bit of Bread," has had a large share in encouraging the formation of these institutions, and of a society for their systematic encouragement. The town library system, which works so well in England, has failed in France; most of the town libraries are of old institution, and have fallen far behind the demands of the age in science and literature. This failure appears to be an admitted fact, and the attempt to leaven the mass of popular ignorance has in consequence sought new channels.

At Lyons, St. Etienne, Guebwiller, Charleville, and other places, there are found societies which appear to correspond somewhat with the "mutual schools" familiar to those acquainted with the village life of South Lancashire.

In Portugal there are workmen's unions, which give aid to the unemployed, relieve the widows and orphans of deceased members, and perform the functions of friendly societies. They also devote themselves to the education of the people, by means of night-schools, libraries, lectures, &c.* These associations are numerous. Those of Lisbon had, in 1862, above 12,000 members.

* Their objects are thus stated:—"1° Venir en aide aux ouvriers dans les circonstances malheureuses, comme la *vieillesse*, le manque de travail; donner des secours aux veuves et enfants des ouvrieres décédés. 2° Assurer et hâter le développement intellectuel de leurs membres, en établissant des écoles de soir, des bibliothèques, des salles de lecture, des expositions, &c."—*Rapport*, t. i. p. 497. Is there not need for improvement when *old age* has to be reckoned in sad sincerity as one of the workman's misfortunes?

In 1863 a novel co-operative society was formed by some journeyman printers, who were desirous of spreading the classic works of French literature amongst their fellows of the labouring-classes. It was a happy thought, but how to carry it into effect? The promoters were actuated, not by any desire of gain, but by considerations of the public good, to be obtained by placing the finest works of the national intellect in the cottage of the workman. In a short time, 120 workmen engaged to pay one franc weekly for a year, to provide capital for the publication of the six first volumes of the National Library (*Bibliothèque Nationale*). The works were well received by the public, and the large sale encouraged the continuation of the series to twenty volumes. It was necessary to reprint some of the earlier volumes, but they found the expenses of their bookshop, &c. had absorbed their entire capital. "No one," says M. Blanc, "dreamed of complaining; it was, on the contrary, with a smile upon their lips, and contentment in their hearts, that the founders of the 'Bibliothèque Nationale' sought again in the corners of their purses for the 20-sous pieces necessary for the continuation of the work they had begun." The capital reached 12,000 francs, and the works of Voltaire, &c. were thus published at a price equal to 2½*d.* per volume. Those who had furnished the capital were now recompensed by receiving gratis the publications of the society, which they had formerly bought like the rest of the public.

The success which attended their experiment led to the projection of a second series of a slightly different class. The works they had published were of an excellent character, but they appealed to such of the labouring-classes as already possessed a certain degree of intelligence and education. They now determined, for the benefit of those who had not already this primary education, to publish a "Library of Education." This task was a much more difficult one than that which they had successfully achieved. It was necessary in this case to have the books specially written, instead of being able to select at pleasure those which all the world have agreed upon as the best. By the aid of some men of letters, who took an interest in the good work, they were enabled to issue concise manuals of grammar, geometry, geography, natural history, &c. &c. The two collections included, in 1868, 142 volumes, of which two million copies had been sold.

The communal institutions of Russia have not received that amount of careful study which they deserve. The Russians may almost be described as a nation of Socialists. No cultivator has more than a life-interest in the land; at the death of the holder it reverts to the community. In some parts, even this modified form of individual property does not exist, but all join in the common work, and all share in the common profits. For the rest, the mujiks appear to enjoy a large share of self-government, the election of the communal officers being in the hands of the general assembly, which is convoked three times each year, and of which extraordinary meetings are held whenever there arises anything of special importance to be decided. The Starosta, or chief man, is sometimes appointed by the superior authorities, but generally by the commune. He, in conjunction with

the elders, exercises judicial functions within certain limits. Practically, they are a useful and efficient court of arbitration. To the Russian the commune is all-important; it is a national feeling, which finds expression even in the proverbs of the people. What changes the emancipation of the serfs may have on these institutions it is difficult to say. The policy of the Government has been to discourage them, and substitute in their place the system of peasant proprietorship. That the old plan has a deep hold on the affections of the people is undoubted, but the statement of the "Pall Mall Gazette," that not a peasant in Russia had availed himself of the facilities given him by the law of emancipation of becoming the freeholder of the land on which he lived, is incorrect. From an article by M. V. de Porchine, founded on the statistics presented to the "Société d'Économie Politique de Paris," by M. Milutine, we learn that in February 1865, 2,549,298 peasants had purchased their own plot of land, and that 2,426,027 had paid instalments with the same object; in fact, that 4,975,325 mujiks were in the way of becoming peasant proprietors.

In Russia, we find also curious confederations of commercial and manufacturing labourers. There are above a score of these "arteles" at St. Petersburg alone. The total number of members is above 3000. The best-known is that attached to the bourse and custom-house. The society is responsible for the good conduct of its members. The director is chosen by and from the society. A manufacturer in want of men addresses himself to this head-man, who appoints the members who are to go. No member can engage himself except by the direction of the chief. Nor are the wages payable to the employé, but to the director, and a strict account is kept of all sums received. The profits are divided amongst the members. A member who falls ill, may receive his salary from the society for one year, unless his malady is the result of his own folly or evildoing. At death, the privilege of membership is sold by the heirs. The entrance-fee is large, about 1000 roubles (150*l.*); of this sum a part, varying from 25*l.* to 50*l.*, is paid at once, and the remainder by annual deductions from wages and profits. The entrance-fee is divided amongst the members. When a member wishes to leave, about a third of the entrance-money is returned to him. This parting fee is derived, in the same manner, from a discount on the profits of those who were members when he joined, and who shared in the distribution of his preliminary payment. The members may draw a portion of their money on account, to meet current expenses, but the general division of profits is made annually, and in equal shares, with the exception of the Starosta (head-man), secretary, and treasurer, who receive a small extra payment for their services to the "artele." The number of members varies from 30 to 150. Stringent rules are enforced for the punishment of any misconduct.

The extent of these "arteles" is immense; they have a large share of the national industry in their hands. Almost the entire fishing-trade is conducted in this manner. Even the travelling hawkers—who, in the present condition of Russia, perform an important part in bringing goods, &c. to small villages, almost shut out from the rest of the

world by the difficulties of communication—form themselves into temporary "arteles," and work for the common good. These associations generally last for three years, when the affairs of the society are wound up, and the profits equally divided.

The length to which this article has already extended prevents us from examining the history and organisation of the many communistic experiments which have been tried in America. Mr. Dixon's "New America" has made some of these religions famous, and for want of space we must simply refer the reader to that book for an account of the Shakers and others, who, in this present age, have, like the early Christians, all things in common.

Thus we bring our task to a close: like Puck, we have put a girdle round the earth in forty minutes, and seen, in various climes, the efforts of the people to raise themselves from dependence and misery. And the moral of the story? We leave it to carry its own moral with it; the eloquence of facts is the most convincing oratory. It is possible that co-operation may be but a curious episode of industrial life, but it is also possible that these associations are (as the present writer has elsewhere said) the faint streaks of light flushing the grey sky, and heralding the dawn of that glorious day when the strife and discord of our own age shall be succeeded by harmony and peace; when

> "Each man seeks his own in all men's good,
> And all men work in noble brotherhood."

WILLIAM E. A. AXON.

NOTE.—In writing this paper the following authorities have been chiefly relied on:—"The Co-operator:" Manchester, 1860-69.—This well-conducted periodical, under the editorship of Mr. Henry Pitman, has become the recognised organ of the movement, and is a storehouse of materials for co-operative history. "Journal des Economistes:" Paris, 1846-69.—A large share of attention is paid to co-operation in this journal of European fame. We may specify the papers by Reybaud, Duval, Robert, Porochine, Ott, Garnier, &c. "The Industrial Partnerships Record" (edited by E. O. Greening and R. B. Walker).—With the second volume, the title was changed to "Social Economist," and the paper passed to the editorial care of G. J. Holyoake. "L'Association," 1868.—Of this periodical, which fell a victim to the press laws of France, we have not been able to obtain a set. "Les Associations Ouvrières," par Eugène Veron: Paris, 1865. "Lettres sur la Co-opération," par Léon A. Rieder: Paris, 1868. "L'Association Co-opérative des Sociétés Co-opératives de Production," par M. Eugène Villedien: Paris, 1869. "Les Associations Co-opératives," par M. Jules Duval: Paris, 1866 (*Association Polytechnique. Cours d'Economie Industrielle*). "Almanac de la Co-opération," 1869. "Exposition Universelle de 1867, Rapports du Jury International," publies sous la direction de M. Michel Chevalier: Paris, 1868. "Correspondence with Her Majesty's Missions Abroad regarding Industrial Questions and Trades Unions:" London, 1867 (*Parliamentary paper*). "Report of the Proceedings of the London Co-operative Congress," edited by J. M. Ludlow: London, 1867. "Social Innovators and their Schemes," by William Lucas Sargent: London, 1858. "Historical Revelations," by Louis Blanc: London, 1858. "Les Associations Ouvrières (Sociétés Co-opératives) et de leur situation legale en France," par Paul Hubert-Valleroux: Paris, 1869. Various other works and magazine articles have been consulted. The writer's thanks are due to Mr. Henry Pitman, Dr. Crestadoro, and Mr. R. B. Walker, for the aid they have given him.

PART II.

LEGISLATION, STATISTICS, AND CHRONICLE OF 1868-69.

CLASSIFIED SUMMARY OF ACTS OF PARLIAMENT,

PASSED IN THE FIRST SESSION OF THE TWENTIETH PARLIAMENT OF GREAT BRITAIN AND IRELAND.

("L" in parenthesis after the title signifies that the Act originated in the House of Lords, and "C" that it originated in the House of Commons. "1r." stands for first reading; "2r." for second reading; and "3r." for third reading. Of those Acts to the title of which an asterisk is prefixed, an abstract is given in the pages following the Summary.)

1. ARMY AND NAVY.

FORTIFICATIONS (PROVISION FOR EXPENSES) (C), for providing the final sum necessary to be raised by Loan for carrying on the works now in course of construction for the protection of the Royal Arsenals and Dockyards and the Ports of Dover and Portland, and for authorising the abandonment of that portion of the works already sanctioned by Parliament which has not been yet commenced, Mr. Cardwell and Captain Vivian.

Commons: July 19, 1r.; 22, 2r.; 30, Committee amendments negatived; 31, 3r. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

MARINE MUTINY (C), Messrs. Dodson, Childers, and Ayrton, for the better regulation of marines ashore.

Commons: Mar. 9, 1r.: 18, 2r.; 19, through Committee, amended; 22, considered; 23, 3r. *Lords' Stages:* Apr. 5, 6, 8, 9. *Royal Assent*, Apr. 19.

*MILITIA (C), Mr. Cardwell and Major Vivian, to amend the law relating to the militia by allowing them to join the army in training.

Commons' Stages: Apr. 15, 20, 22, 23. *Lords:* Apr. 27, 2r.; 29, Committee; May 3, report; 3, 3r. *Royal Assent*, May 13.

MILITIA (IRELAND) (C), to amend "The Militia (Ireland) Act, 1854," as to providing houses or places for the keeping of the arms, accoutrements, clothing, or other stores of the Militia when not embodied, Mr. Chichester Fortescue and Mr. Attorney-General for Ireland.

Commons: July 20, 22, 29, 30. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

MILITIA PAY (C), to defray the charge of the pay, clothing, and contingent and other expenses of the Disembodied Militia in Great Britain and Ireland; to grant allowances in certain cases to subaltern officers, adjutants, paymasters, quartermasters, surgeons, assistant-surgeons, and surgeons' mates of the Militia; and to authorise the employment of the non-commissioned officers.

Commons: June 18, July 19, 22, 30. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

*Millbank Prison (L), to enable military offenders to be confined therein, Lord Northbrook.

Lords' Stages: July 27, 30; Aug. 2, 3. *Commons' Stages:* Aug. 3, 4, 5, 6. *Royal Assent*, Aug. 9.

Mutiny (C), Messrs. Dodson, Cardwell, and the Judge Advocate General.

Commons: Mar. 12, 1r.; 18, 2r.; 19, Committee; Mar. 22, 3r. *Lords' Stages:* Apr. 5, 6, 8, 9. *Royal Assent*, Apr. 19.

*Naval Stores (L), Marquis of Lansdowne, for the better protection of.

Lords: Mar. 16, 1r.; Apr. 2, 2r.; 15, Committee; 16, amendments reported; 19, amended and 3r. *Commons:* Apr. 21, 1r.; 23, 2r.; 26, Committee, amended; 28, considered; 29, 3r. *Royal Assent*, May 13.

Pensions Commutation (C), the Chancellor of the Exchequer and Mr. Stansfeld, to provide for the commutation of pensions payable to officers of the army and navy.

Commons: June 29, July 5, 6, 7, 8. *Lords:* July 9, 15, 16, 19. *Royal Assent*, July 26.

*Volunteer Act (1863) Amendment (C), to amend the Volunteer Act, 1863, Captain Vivian and Mr. Secretary Cardwell.

Commons: July 22, 26, 29, 30. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

---

2. CHURCH AND EDUCATION.

*Bishops' Resignation (L), the Archbishop of Canterbury, for the relief of archbishops and bishops when incapacitated by infirmity.

Lords' Stages: July 5, 13, 15, 19, 20. *Commons' Stages:* July 26, Aug. 2, 5, 6 (limited to two years in Committee). *Royal Assent*, Aug. 11.

*Endowed Schools (C), Messrs. Forster and Bruce, to amend the law relating to endowed schools and other educational endowments in England, and otherwise to provide for the advancement of education.

Commons: Feb. 18, 1r.; Mar. 15, 2r., and referred to Select Committee; May 10, Committee authorised to divide the Bill, and to report two Bills; May 11, Bill reported, to be printed (No. 115), and minutes of proceedings to be printed (No. 208); June 17, Committee; June 18, 3r. *Lords:* June 22, 28, July 15, 23, 26, 29. *Royal Asent*, Aug. 2.

*Irish Church (C), to put an end to the Establishment of the Church in Ireland, and to make provision in respect of the temporalities thereof, and in respect of the Royal College of Maynooth, Messrs. Dodson, Gladstone, Bright, Fortescue, and the Attorney-General for Ireland.

Commons: Mar. 1, 1r.; Mar. 18, debate on 2r. commenced; resumed Mar. 19, 22, 23; Mar. 24 (2.45 a.m.), 2r. carried by 368 against 250; April 15, consideration in Committee begun, and continued on April 16, 19, 22, 23, 26, 29, May 3, 4, 6, 7; Bill reprinted (No. 112); May 13, report; May 28, recommitted; May 31, 3r.; July 15 and 16, Lords' amendments considered; July 23, Lords' amendments to Commons' amendments considered. *Lords:* June 1, 1r.; June 14, 15, 17, 18, debates on 2r., carried by 179 against 146; June 29, July 1, 5, 9, Committee; July 12, 3r.; July 20, 22, 23, consideration of Commons' amendments to Lords' amendments. *Royal Assent*, July 26.

*New Parishes and Church-building Acts Amendment (L), the Archbishop of York, to amend the Acts named.

Lords: May 13, 1r.; June 11, 2r.; June 24, July 12, Committee; 13, report; 15, 3r. *Royal Assent*, Aug. 11.

Norfolk Island Bishopric (L), Earl Granville, to amend so much of the 6th and 7th Vict. c. 35, as provides that Norfolk Island is to be part of the diocese of Tasmania.

Commons: May 13, 1r.; 6, 2r.; 31, Committee; June 2, 3r. *Lords:* Apr. 23, 1r.; 26, 2r.; 27, Committee; 29, 3r. *Royal Assent*, Aug. 24.

Oxford University Statutes (C), to remove doubts as to the validity of certain statutes passed by the Convocation of the University, Mr. Hardy.

Commons: May 28, 1r.; June 1, 2r.; 3, Committee and 3r. *Lords' Stages:* June 4, 8, 11, 14. *Royal Assent*, June 24.

*Presentation of Benefices Belonging to Roman Catholics, &c. (L), the Archbishop of Canterbury, to repeal part of an Act of William & Mary, which involved forfeiture for sixty days' non-residence.

Lords: July 22, 29, 30, Aug. 2. *Commons:* Aug. 5, 6, 7. *Royal Assent*, Aug. 11.

Public Schools Act (1868) Amendment (C), Mr. Bruce and the Solicitor-General.

Commons: July 14, 22, 23, 26. *Lords:* July 27, 29, 30, Aug. 2. *Royal Assent*, Aug. 9.

Straits Settlements (L), Earl Granville, for the separation of the Straits Settlements from the diocese of Calcutta.

Lords' Stages: July 27, 30, Aug. 2, 3. *Commons' Stages:* Aug. 3, 5, 6, 7. *Royal Assent*, Aug. 9.

Sunday and Ragged Schools (C), Messrs. C. Reed, Bazley, Graves, and McArthur, to exempt from rating Sunday and ragged schools for gratuitous instruction.

Commons: Apr. 8, 1r.; June 16, 2r., carried by 228 against 71; June 22, 25, July 1, 5, Committee; 8, report; 12, 3r. *Lords:* July 13, 19, 20, 22. *Royal Assent*, July 26.

*Titles of Religious Congregations Act Extension (C), to extend to burial-grounds the provisions of the Act of the 13th and 14th Vict. c. 28, intituled "An Act to render more simple and effectual the titles by which congregations and societies, for purposes of religious worship or education in England and Ireland, hold property for such purposes," Mr. Headlam and Mr. Pease.

Commons: May 13, 1r.; June 7, 2r.; 11, Committee; 14, 3r. *Lords:* June 15, July 2, 5, 6. *Royal Assent*, July 12.

---

3. CRIME AND PAUPERISM.

Colonial Prisoners Removal (L), Earl Granville, for authorising the removal of offenders from one colony to another for the purposes of punishment.

Lords: April 13, 1r.; 15, 2r.; 19, Committee; 20, 3r. *Commons:* April 22, 1r.; 26, 2r.; 27, Committee; 28, 3r. *Royal Assent*, May 13.

Contagious Diseases (L), to amend "The Contagious Diseases Act, 1866," Lord Northbrook.

Lords: July 23, 27, 29, 30, Aug. 2. *Commons:* Aug. 5, 6, 7. *Royal Assent*, Aug. 11.

Criminal Lunatics (C), Mr. Knatchbull-Hugessen and Mr. Bruce, to amend the law.

Commons' Stages: June 22, July 22, 23, 30. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

*Habitual Criminals (L), Earl of Kimberley, for the more effectual prevention of crime.

Lords: Feb. 26, 1r.; Mar. 5, 2r.; 15, passed through Committee with amendments; April 6, amendments reported and others made; 8, 3r. *Commons:* April 12, 1r.; July 26, 2r.; Aug. 4 and 5, Committee; 6, report and 3r. *Royal Assent*, Aug. 11.

Poor Law (Ireland) Amendment (C), Mr. Gregory and Col. Vandeleur.

Commons: June 22, 28, July 5, 6, 9, 13, 15, 16, 19. *Lords:* July 20, 22, 23, 26, 27. *Royal Assent*, Aug. 2.

Poor Law Board Provisional Orders (C), to confirm three orders with reference to city of Chester, the incorporated hundreds of Tunstead and Happing (Norfolk), and the parish of Wool Lavington (Sussex), Mr. Peel and Mr. Goschen.

Commons' Stages: June 16, 17, 18, 21. *Lords:* June 21, July 13, 15, 16. *Royal Assent*, July 26.

Poor Law Union Loans (C), Mr. Hibbert, Mr. Candlish, and Mr. Dillwyn, to transfer certain parochial payments from parish to union funds, and to alter and amend the law respecting the repayment of moneys borrowed by Poor Law Unions.

Commons: May 13, 1r.; June 10, 2r.; 17, Committee, amended; 21, Committee; 23, 3r. *Lords:* June 24, July 5, 15, 19, 22. *Royal Assent*, Aug. 2.

Poor Relief (Ireland) Act (1862) Amendment (C), to amend the Act of the 25 & 26 Vict. c. 83, s. 9, by extending the age at which orphan and deserted children may be kept out at nurse, Admiral Seymour and Mr. O'Neill.

Commons: May 11, June 1, 8, 9. *Lords:* June 11, 24, 25, 28. *Royal Assent*, July 12.

*Prevention of Gaming (Scotland) (L), to prevent gaming in public places, the Earl of Morley.

Lords: July 20, 23, 26, 27, 29. *Commons:* July 29, Aug. 2, 5, 6. *Royal Assent*, Aug. 9.

Prisons (Scotland) Administration Act (1860) Amendment (C), to amend "The Prisons (Scotland) Administration Act, 1860," the Lord Advocate, Mr. Secretary Bruce, and Mr. Solicitor-General for Scotland.

Commons: June 3, 17, 21, 24, 28. *Lords:* June 23, July 16, 19, 20. *Royal Assent*, July 26.

---

4. FINANCE AND TAXATION.

Accounts, &c., Presentation (C), to amend the law relating to the presentation of Accounts, Statements, Returns and Documents to Parliament, Mr. Ayrton and Mr. Chancellor of the Exchequer.

Commons' Stages: July 22, 26, 29, 30. *Lords:* Aug. 5, 6, 7. *Royal Assent*, Aug. 9.

*Assessed Rates (C), for amending the law with respect to the rating of occupiers for short terms; Messrs. Goschen, Bruce, and Bright.

Commons: Feb. 25, 1r.; June 7, 2r.; June 8, committed *pro formâ* and ordered to be reprinted (149); June 21, Committee; July 2, ditto; 5, 3r. *Lords:* July 6, 13, 20, 23. *Royal Assent*, July 26.

Canada (Rupert's Land) Loan (C), for authorising a guarantee of a

loan to be raised by Canada for a payment in respect of the transfer of Rupert's Land; Mr. Stansfeld and the Chancellor of the Exchequer.

Commons: Aug. 2, 1r.; 5, 2r.; 6, Committee; 7, report and 3r. *Lords:* Aug. 9, 10. *Royal Assent*, Aug. 11.

CIVIL OFFICES, PENSIONS (C), Messrs. Dodson, Gladstone, Lowe, to alter and amend the Acts enabling her Majesty to grant pensions to persons having held certain high civil offices.

Commons: Feb. 23, leave given; Mar 9, 1r.; Mar. 22, 2r.; May 27, Committee, Bill amended; May 29, report; June 28, 3r. *Lords:* June 29, July 30, Aug. 2, 3. *Royal Assent*, Aug. 9.

CIVIL SERVICE PENSIONS (C), Messrs. Locke King and Russell Gurney, to remove doubts as to the qualification of persons holding civil service pensions or receiving superannuation allowances to sit in Parliament.

Commons: Mar. 11, 1r.; Mar. 18, 2r.; April 8, Committee; 12, 3r. *Lords:* April 13, 1r.; 30, 2r.; May 4, Committee; 13, 3r. *Royal Assent*, June 24.

CONSOLIDATED FUND (8,406,272*l.*) (C), to apply sums to the service of the years ending March 1868, 1869, and 1870.

Commons' Stages: Mar. 10, 11, 12, 15. *Lords:* Mar. 15, 16, 18, 19. *Royal Assent*, Mar. 19.

CONSOLIDATED FUND (17,000,000*l.*) (C), to apply the sum to the service of the year ending March, 1870.

Commons' Stages: April 23, 26, 27, 28. *Lords:* April 29, 30; May 3, 4. *Royal Assent*, May 13.

CONSOLIDATED FUND (APPROPRIATION) (C), to appropriate the supplies granted during the Session.

Commons' Stages: July 31, Aug. 2, 3, 4. *Lords:* Aug. 5, 6, 7, 9. *Royal Assent*, Aug. 11.

*CUSTOMS AND INLAND REVENUE DUTIES (C), Mr. Lowe and Mr. Ayrton, to carry out the Budget resolutions.

Commons: April 23, 1r.; May 11, 2r.; May 27, Committee; 31, report; June 1, 3r. *Lords' Stages:* June 3, 11, 14, 15. *Royal Assent*, June 24.

DIPLOMATIC SALARIES, &C. (C), to provide for the payment of diplomatic salaries, allowances, and pensions, Mr. Dodson, the Chancellor of the Exchequer, and Mr. Stansfeld.

Commons: May 11, 1r.; May 27, 2r.; Committee, June 3, 7; June 10, report; June 11, 3r. *Lords:* June 14, 25, July 13, 15. *Royal Assent*, Aug. 2.

*DIVIDENDS ON PUBLIC STOCKS (C), to facilitate the payment of dividends on the public stocks, and for making regulations with respect thereto, Mr. Stansfeld and the Chancellor of the Exchequer.

Commons' Stages: July 29, 30, Aug. 2, 3, 4. *Lords:* Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

EAST INDIA LOAN (C), to enable the Secretary of State to raise money in the United Kingdom for the Government of India, Mr. Grant Duff and Mr. Stansfeld.

Commons: July 30, Aug. 2, 3, 4. *Lords:* Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

EXCHEQUER BONDS (2,300,000*l.*) (C), for raising a sum by Exchequer Bonds for the service of the year ending on the 31st of March, 1870, the Chancellor of the Exchequer and Mr. Ayrton.

Commons: June 8, 1r.; 9, 2r.; 11, Committee; 14, 3r. *Lords' Stages:* June 15, 17, 18, 21. *Royal Assent*, June 24.

GREENWICH HOSPITAL (C), Messrs. Trevelyan, Childers, and Adam, to make better provision respecting Greenwich Hospital and the application of the revenues thereof.

Commons: April 27, leave; May 4, 1r.; June 11, 2r.; 24, Committee; 28, report; 29, 3r. *Lords:* July 1, 16, 19, 20. *Royal Assent*, Aug. 2.

HARBOUR OF GALLE LOAN (C), to empower the Loan Commissioners to advance not more than 250,000*l.* to improve the harbour of Galle, Ceylon, Mr. Grant Duff and Mr. Stansfeld.

Commons: July 30, Aug. 2, 3, 4. *Lords:* Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

JAMAICA LOANS (C), to provide for the better liquidation of loans raised under the guarantee of Her Majesty for the service of the colony.

Commons: July 7, 12, 16, 19. *Lords:* July 20, 29, 30, Aug. 2, 3. *Royal Assent*, Aug. 9.

---

5. LAW AND JUSTICE.

*BANKRUPTCY (C), to consolidate and amend the law of, the Attorney-General and the Solicitor-General.

Commons: Mar. 5, leave to introduce; Mar. 15, 1r.; April 5, 2r; speakers, Messrs. Norwood, Jessel, G. Gregory, Simon, Ald. Lawrence, Morley, S. Hill, H. Palmer, Ald. Lusk, F. Smith, and Anderson, Sir F. Goldsmid, and the Attorney-General; April 26, committed *pro formâ*, amended, and to be reprinted as bill No. 97. Committee, June 3, 8, 11, 15, 18, 22; June 25, report; 28, 3r.; Aug. 2, Lords' amendments considered. *Lords:* June 28, 1r.; July 8, 2r.; July 16, referred to a Select Committee, which was named July 20, and reported July 22; July 26, Committee; 27, report; 29, 3r.; Aug. 5, Commons' amendments agreed to. *Royal Assent*, Aug. 9.

*CHARITY COMMISSIONERS (L), the Lord Chancellor, for amending the Charitable Trusts Acts.

Lords' Stages: July 5, 13, 20, 22. *Commons' Stages:* July 26, 29; Aug. 5, 6, 7, 9. *Royal Assent*, Aug. 11.

*CLERK OF ASSIZE BILL (C), Mr. Ayrton and the Chancellor of the Exchequer, to amend the law relating to the office and offices united thereto, and to certain fees upon orders for payment of witnesses in criminal proceedings.

Commons: July 8, 19, 29, 30. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

COURT OF COMMON PLEAS, LANCASTER (C), Messrs. West, Bazley, and Denison, to authorise the appointment of district prothonotaries of the Court of Common Pleas of the County Palatine of Lancaster, and to provide for the better despatch of business.

Commons: Feb. 26, 1r.; Mar. 5, 2r.; Apr. 5 and 19, Committee; Apr. 22, as amended considered; Apr. 26, 3r. *Lords*: Apr. 27, July 1, 13, 15, 16. *Royal Assent*, July 26.

*COURTS OF JUSTICE SALARIES AND FUNDS (C), Mr. Lowe and Mr. Ayrton, to amend the law relating to the salaries, expenses, and funds of courts of law in England.

Commons: Apr. 23, 1r.; June 25, 2r.; 29, Committee; July 15, report (new clauses and amendments); July 22, 3r. *Lords:* July 23, Aug. 2, 3, 5. *Royal Assent*, Aug. 9.

*DEBTS OF DECEASED PERSONS (C), to abolish the distinction which now

exists between the specialty and simple contract debts of deceased persons, Messrs. Hinde Palmer, Locke King, and Headlam.

Commons: June 16, 22, 29, 30, July 1. *Lords:* July 2, 23, 26, 27. *Royal Assent*, Aug. 2.

*Election Commissioners' Expenses (C), to provide for their payment, the Attorney-General and Mr. Ayrton.

Commons' Stages: May 5, 27, 28, 31 (amended, No. 139), June 3 and 7. *Lords' Stages:* June 8, 11, 14, 15. *Royal Assent*, June 24.

*Evidence Amendment (C), Messrs. Denman, Locke King, and Loch, to amend the law of evidence (by admitting that of parties to suits in breach of promise and divorce cases, and abolishing exclusion in respect of religious belief).

Commons: Feb. 25, 1r.; Apr. 28, 2r.; May 10, committee amended; May 27, Committee; May 28, 3r. *Lords:* June 1, July 26, 29, Aug. 2, 3. *Royal Assent*, Aug. 9.

Expiring Laws Continuance (C), Mr. Ayrton and Mr. Bruce.

Commons: July 29, 30, 31, Aug. 2. *Lords:* Aug. 5, 6, 7. *Royal Assent*, Aug. 9.

*Imprisonment for Debt, to abolish, the Attorney-General, the Solicitor-General, and the Chancellor of the Exchequer.

Commons: Feb. 19, 1r.; Apr. 5, 2r.; 26, committed, *pro formâ*, amended, and to be reprinted as Bill No. 98; Committee, June 18, 22, 25; 29, report; July 1, 3r.; Aug. 2, Lords' amendments agreed to. *Lords:* July 2, 1r.; 8, 2r.; 16, referred to the Select Committee on the Bankruptcy Bill; 22, order for so referring it discharged, and Bill considered in Committee of the whole house; 27, report; 30, 3r. *Royal Assent*, Aug. 9.

*Insolvent Debtors' and Bankruptcy Repeal (C), to provide for the winding-up of the business of the late Court for the Relief of Insolvent Debtors in England, and to repeal enactments relating to Bankruptcy, and matters connected therewith, the Attorney-General and the Solicitor-General.

Commons: May 11, leave to introduce; 28, 1r.; June 18, 2r.; Committee, 22, 25, July 9; 12, report; 13, 3r.; Aug. 5, Lords' amendments agreed to. *Lords:* July 15, 29, 30, Aug. 2, 3. *Royal Assent*, Aug. 9.

Judicial Statistics (Scotland) (C), to provide for the collection of judicial statistics in Scotland, the Lord Advocate, Mr. Secretary Bruce, and Mr. Solicitor-General for Scotland.

Commons: June 3, 1r.; 17, 2r.; 21, Committee; 24, 3r. *Lords:* June 25, July 15, 16, 19. *Royal Assent*, July 26.

*Recorders' Deputies (C), Mr. Denman and Mr. West, to extend the power of recorders to appoint deputies in certain cases.

Commons' Stages: May 4, 5, 10, 11. *Lords:* May 13, 1r.; June 8, 2r.; 11, Committee; 14, report; 15, 3r. *Royal Assent*, July 12.

*Special Bails (C), to facilitate the taking of special bails in civil proceedings depending in the superior courts of law at Westminster, and in proceedings in error and on appeal, Mr. Hadfield and Mr. Denman.

Commons: June 11, 16, 25, 29, 30. *Lords:* July 1, 13, 20, 22. *Royal Assent*, July 26.

Stipendiary Magistrates' Deputies (C), to amend the law concerning their appointment, Viscount Sandon, Mr. Muntz, and Mr. Rathbone.

Commons: June 23, 29; July 5, 6, 8. *Lords:* July 9, 16, 19, 20. *Royal Assent*, July 26.

Titles to Land Consolidation (Scotland) Act (1868) Amendment (C), to amend "The Titles to Land Consolidation (Scotland) Act,

1868," the Lord Advocate, Mr. Secretary Bruce, and Mr. Solicitor-General for Scotland.

Commons: June 3, 1r.; 17, 2r.; 28 and July 22, Committee; 23, 3r. *Lords:* July 26; Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

---

6. LOCAL GOVERNMENT.

BROUGHTY FERRY PROVISIONAL ORDER CONFIRMATION (C), Bill to confirm a Provisional Order under "The General Police and Improvement (Scotland) Act, 1862," relating to the burgh of Broughty Ferry, the Lord Advocate and Mr. Adam.

Commons: Aug. 2, 5, 6, 7. *Lords:* Aug. 9, 10. *Royal Assent*, Aug. 11.

CINQUE PORTS ACT AMENDMENT (C), Mr. Hugessen and Mr. Bruce.

Commons' Stages: July 9, 12, 21, 22. *Lords:* July 23, 27, 29, 30. *Royal Assent*, Aug. 2.

COURT OF SESSION ACT (1868) AMENDMENT (C), to amend "The Court of Session Act, 1868," in so far as the exemption of lighthouse-keepers from serving on juries is thereby abolished, the Lord Advocate, Mr. Secretary Bruce, and Mr. Solicitor-General for Scotland.

Commons: June 3, 1r.; 17, 2r.: 28, Committee; 29, 3r. *Lords* July 1, 16, 19, 20. *Royal Assent*, July 26.

CURSITOR (COUNTY OF DURHAM), (L), to abolish the office, the Lord Chancellor.

Lords: Aug. 5, 6, 7. *Commons:* Aug 10, 11. *Royal Assent*, Aug. 11.

DUBLIN FREEMEN COMMISSION (C), for appointing commissioners to inquire into the existence of corrupt practices amongst the freemen electors of the city of Dublin, the Attorney-General for Ireland and Mr. Fortescue.

Commons: June 29, leave moved for and debate adjourned; July 21, 1r.; 5, 2r. by 246 against 126; 19, Committee; 20, 3r. *Lords:* July 22, 1r.; Aug. 2, 2r.; 3, Committee; 5, 3r. *Royal Assent*, Aug. 9.

ENDOWED HOSPITALS (C), to make better provision for endowed hospitals and endowed educational institutions in Scotland, the Lord Advocate, Mr. Bruce, and Mr. Adam.

Commons: Apr. 14, 1r.; 22, 2r. May 6, committed *pro formâ* to be reprinted as Bill No. 110. May 13, recommitted and reprinted as Bill No. 124. June 17, Committee; 28, report; June 7, 3r. *Lords:* July 6, 20, 22, 23. *Royal Assent*, July 26.

*FINES AND FEES COLLECTION (C), to enable local authorities to collect fines and fees by means of stamps, Mr. Hunt, Mr. Sclater-Booth, and Mr. Staveley Hill.

Commons: June 10, 1r.; 18, 2r.; 22, Committee; 24, report; 25, recommitted, amended, and 3r. *Lords:* June 28; July 20, 22, 23, 26. *Royal Assent*, Aug. 2.

*HACKNEY AND STAGE CARRIAGES LAW AMENDMENT (C), for amending the law relating to hackney and stage carriages within the metropolitan police district, Mr. Secretary Bruce and Mr. Knatchbull-Hugessen.

Commons: July 20, 29, 31; Aug. 2, 3. *Lords:* Aug. 5, 6, 7, 9. *Royal Assent*, Aug. 11.

*HIGH CONSTABLES' OFFICE ABOLITION, &c. (C), to provide for the dis-

charge of the duties heretofore performed by high constables, and for the abolition of such office, Mr. Hunt, Mr. Sclater-Booth, and Mr. Staveley Hill.

Commons: June 10, 1r.; 18, 2r.; 28 and July 5, Committee; 7, report; 8, 3r. *Lords:* July 9, 22, 23, 27. *Royal Assent*, Aug. 2.

LOCAL GOVERNMENT SUPPLEMENTAL (C), Mr. Knatchbull-Hugessen and Mr. Bruce, to confirm orders affecting Bideford, Bournemouth, Bowness, Bristol, Croydon, Fleetwood, Hanley, Harrogate, Litchurch, Litherland, Portsmouth, Rochdale, Ryde, and Worthing.

Commons: Apr. 21, 1r.; 22, 2r.; May 11, referred to a select committee as relates to Croydon; June 1, as relates to Worthing; 9, reported (No. 155); 17, Committee; 18, report and 3r. *Lords:* June 22, July 16, 19, 20. *Royal Assent*, July 26.

LOCAL GOVERNMENT SUPPLEMENTAL (No. 2) (C), affecting Aberystwith, Ashton-under-Lyne, Bath, Cleckheaton, Crompton, Newport (Mon.), Reading, Southport, Stalybridge, Weston-super-Mare, Gorleston, and Southdown.

Commons: July 1, 5, 8, 9. *Lords:* July 12, 20, 22, 23, 26. *Royal Assent*, Aug. 2.

LOCAL OFFICERS' SUPERANNUATION, Ireland (C), Mr. Pim and Sir J. Gray, to enable corporate and other public bodies to grant superannuation allowances to officers in certain cases.

Commons: Apr. 20, 1r.; May 4, 2r.; July 20, Committee; 29, recommitted. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

MEDICAL OFFICERS' SUPERANNUATION (C), to provide for superannuation allowances to medical officers of poor-law unions and of dispensary districts of such unions in Ireland, Messrs. Brady, Pim, and J. Hamilton.

Commons: Mar. 11, 1r.; June 23, 2r.; 29 and July 5, Committee; 7, report; 8, 3r. *Lords:* July 9, 19, 22, 23, 26. *Royal Assent*, Aug. 2.

METROPOLITAN BUILDING ACT (1855) AMENDMENT (C), Mr. Hugessen and Mr. Bruce.

Commons: July 13, 22, 23, 26. *Lords:* July 27; Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

METROPOLITAN BOARD OF WORKS LOANS (C), Mr. Ayrton, the Chancellor of the Exchequer, and Mr. Goschen.

Commons: June 25; July 20, 2r., and referred to a select committee, which reported July 23; 31, Committee; Aug. 3 and 5, 3r. *Lords:* Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

METROPOLITAN COMMONS ACT (1866) AMENDMENT (C), Mr. T. Chambers and Mr. Locke.

Commons: Apr. 13, 1r.; June 7, 2r.; and referred to a Select Committee; 16, Select Committee nominated; reported July 19; Aug. 3, Committee; 4, report and 3r. *Lords:* Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

METROPOLITAN COMMONS SUPPLEMENTAL (C), to confirm a scheme under the Act of 1866, Messrs. Hugessen and Bruce.

Commons: Mar. 1, 1r.; 8, 2r.; 15, through Committee; 16, 3r. *Lords:* Mar. 18, 1r.; June 7, 2r.; 8, Committee; 11, 3r.; *Royal Assent*, June 24.

METROPOLITAN POOR ACT (1867) AMENDMENT (C), Messrs. Goschen, A. Peel, and Ayrton.

Commons: Mar. 16, 1r.; May 28, 2r., moved; June 7, 2r.; June 25, July 20, Committee; 26, report; 27, 3r. *Lords:* July 27, 29, 30; Aug. 2. *Royal Assent*, Aug. 9.

*MUNICIPAL FRANCHISE (C), Messrs. Hibbert, Hodgkinson, and Candlish,

to shorten the term of residence required as a qualification for the municipal franchise, and for other purposes relating thereto.

Commons: Apr. 15, 1r.; May 4, 2r.; 10, Committee amended; June 7, report, clause conferring franchise on women agreed to; 9, 3r. *Lords:* Apr. 27, 1r.; May 31, 2r.; June 13, Committee; 19, report; 22, 3r. *Royal Assent*, June 24.

PARK GATE CHAPEL MARRIAGES (L), the Archbishop of York, to legalise certain marriages celebrated at the chapel, and to change the name of the Cowgill district chapelry.

Lords' Stages: Apr. 19, 29, 30, and May 3. *Commons' Stages:* May 6; June 8, 11, 14, 21, 24, 25, 28. *Royal Assent*, July 12.

SANITARY ACT (1866) AMENDMENT (I.) (C), the Attorney-General for Ireland and Mr. C. Fortescue.

Commons: Aug. 3, 4, 5, 6. *Lords:* Aug. 9, 10. *Royal Assent*, Aug. 11.

SANITARY ACT (1866) AMENDMENT (C), to facilitate the borrowing money in certain cases for the purpose of "The Sanitary Act, 1866," and the Acts amending the same, Mr. Secretary Bruce and Mr. Knatchbull-Hugessen.

Commons' Stages: July 28; Aug. 2, 3, 4. *Lords:* Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

STANNARIES (C), to amend the law relating to mining partnerships within the Stannaries of Devon and Cornwall, and to the Court of the Vice-Warden of the Stannaries, Messrs. St. Aubyn, Pendarves Vivian, B. Willyams, and Kekewich.

Commons: Feb. 26, 1r.; Mar. 12, 2r.; Apr. 30, Committee, amended, to be reprinted; May 6, considered and amended; 10, 3r. *Lords' Stages:* May 11; June 1, 8, 11, 14. *Royal Assent*, June 24.

VALUATION OF PROPERTY, METROPOLIS (C), to provide for uniformity of assessment, Messrs. Goschen, A. Peel, and Ayrton.

Commons: Feb. 22, 1r.; Apr. 1, 2r.; 30, committed *pro formâ*, amended, and reprinted; July 8, 13, Committee; 23, report; 26, 3r. *Lords:* July 27, 29, 30; Aug. 2. *Royal Assent*, Aug. 9.

7. PUBLIC WORKS.

BASSES LIGHTS (CEYLON) (C), for making better provision for the erection of a lighthouse on the Great Basses Rock in the colony of Ceylon, and for other purposes connected therewith, Mr. Ayrton, Mr. Lowe, and Mr. Duff.

Commons' Stages: July 19, 29, 30, 31. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

DRAINAGE AND IMPROVEMENT OF LANDS (I.) ACT (1863) AMENDMENT (C), to amend the Act and afford further facilities, Mr. Ayrton and the Chancellor of the Exchequer.

Commons: July 9, 15, 29, 30, 31. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

DRAINAGE AND IMPROVEMENT OF LANDS SUPPLEMENTAL (C), Messrs. Ayrton and Fortescue, to confirm a provisional order.

Commons: Mar. 16, 1r.; 22, 2r.; 23, Committee; Apr. 1, 3r. *Lords:* Apr. 5, June 18, 21, 22. *Royal Assent*, June 24.

DRAINAGE AND IMPROVEMENT OF LANDS (I.) SUPPLEMENTAL (C), No. 2, to confirm provisional orders, Mr. Ayrton and Mr. Glyn.

Commons: June 8, 14, 16, 17. *Lords:* June 18, July 30, Aug. 2, 3. *Royal Assent*, Aug. 9.

EAST INDIA IRRIGATION AND CANAL COMPANY (C), for the confirmation and execution of arrangements made between the Secretary of State in Council of India and the East India Irrigation and Canal Company, and for other purposes connected therewith, Messrs. Grant-Duff and Stansfeld.

Commons: Feb. 19, 1r.; Mar. 10, 2r., and referred to a Select Committee; 15, reported without amendment; 16, recommitted and passed through Committee; 17, 3r. *Lords:* Mar. 18, 1r.; Apr. 5, 2r.; 8, Committee, amendments made; 9, amendments reported; 12, 3r. *Royal Assent*, Apr. 19.

PUBLIC PARKS (IRELAND) (C), to afford facilities for the establishment and maintenance of public parks in Ireland, Mr. M'Clure, Mr. William Johnston, Mr. Pim, and Mr. Maguire.

Commons: June 3, 1r.; 8, 2r.; 11, Committee; 14, 3r. *Lords:* June 15, 24, July 1, 2, 5. *Royal Assent*, July 12.

PUBLIC WORKS (I.) (C), to extend from ten to twenty years the period for the repayment of advances of public money for the construction of certain public works in Ireland, and also to incorporate the Commissioners of Public Works in Ireland for certain purposes, and to vest in the said commissioners lands and premises held on public trusts, Mr. Ayrton and the Chancellor of the Exchequer.

Commons: July 8, 23, 29, 30, 31. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

*TELEGRAPH (C), to amend and alter the Telegraph Act, 1868, the Marquis of Hartington, the Chancellor of the Exchequer, and Mr. Ayrton.

Commons: July 6, 1r.; 16, 2r., and referred to a Select Committee, which reported July 22; 26, Committee; 29, report and 3r. *Lords:* July 30, Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

---

8. TRADE AND SHIPPING.

COMPANIES CLAUSES ACT (1863) AMENDMENT (C), Mr. Goldney and Mr. Ekyn.

Commons: May 28, 1r.; June 9, 2r.; 22, Committee; 23, 3r. *Lords:* June 24, July 5, 15, 19, 22. *Royal Assent*, Aug. 2.

*CONTAGIOUS DISEASES, ANIMALS (C), to consolidate, amend, and make perpetual the Acts for preventing the introduction or spreading of contagious or infectious diseases among cattle and other animals in Great Britain, Messrs. Dodson, Forster, and Bruce.

Commons: Mar. 4, 1r.; Apr. 8, 2r.; May 3, committed *pro formâ* to be reprinted as Bill No. 103; Committee, June 14, July 2, 6, 9, 13; 22, 3r.; Aug. 4, Lords' amendments considered. *Lords:* July 23, 30, Aug. 2, 3. *Royal Assent*, Aug. 9.

COUNTY COURTS (ADMIRALTY JURISDICTION) ACT (1868) AMENDMENT (C), to amend the County Courts (Admiralty Jurisdiction) Act, 1868, and to give jurisdiction in certain maritime causes, Mr. Norwood, Mr. Headlam, and Mr. Candlish.

Commons: May 12, 1r.; June 22, 2r.; 30, Committee; July 5, 3r. *Lords:* July 6, 27, 29, 30. *Royal Assent*, Aug. 2.

FISHERIES (I.) (C), to amend the laws, Mr. C. Fortescue and the Attorney-General.

Commons: July 1, 5, 22, 26, 27. *Lords:* July 29, 30, Aug. 2, 3, 5. *Royal Assent*, Aug. 9.

JURISDICTION OF CONSUL AT ZANZIBAR (C), to regulate and extend the jurisdiction of Her Majesty's consul at Zanzibar in regard to vessels captured on suspicion of being engaged in the slave-trade, Mr. Stansfeld and Mr. Ayrton.

Commons: July 22, 26, 29, 30. *Lords:* Aug. 3, 5, 6. *Royal Assent*, Aug. 9.

MERCHANT SHIPPING (COLONIAL) (L), Earl Granville, to amend the laws relating to the colonial trade and merchant shipping in British colonies.

Lords: Apr. 13, 1r.; 16, 2r.; 19, Committee; 20, amended and 3r. *Commons:* Apr. 22, 1r.; 26, 2r.; 27, Committee, amended; 28, considered; 29, 3r. *Royal Assent*, May 13.

*NITRO-GLYCERINE (C), to prohibit, for a limited period, the importation, and to restrict and regulate the carriage of nitro-glycerine, Sir John Hay, Mr. Alderman Lawrence, and Mr. Graves.

Commons: July 12, 1r.; 15, 2r.; 22, committed *pro formâ* and amended; 29, Committee; 30, 3r. *Lords:* Aug. 3, 5, 6, 7. *Royal Assent*, Aug. 9.

OYSTER AND MUSSEL FISHERIES SUPPLEMENTAL (C), Mr. Shaw-Lefevre and Mr. Bright, to confirm Board of Trade orders under "The Sea Fisheries Act, 1868," relating to Dombristle (Forth) and Holy Loch (Clyde).

Commons: Apr. 13, 1r.; 19, 2r., and committed, as regards the Holy Loch, to a Select Committee; June 4, Select Committee reported; 10, Committee; 11, 3r. *Lords:* June 14, 17, 24, 25. *Royal Assent*, July 12.

PHARMACY ACT (1868) AMENDMENT (C), Lord R. Montagu and Sir G. Montgomery.

Commons: Mar. 4, 1r.; Apr. 12, 2r.; 29, Committee, amended; May 10, report; 13, 3r. *Lords:* May 31, July 27, 29, 30, Aug. 2. *Royal Assent*, Aug. 9.

PIER AND HARBOUR ORDERS CONFIRMATION (C), for confirming certain provisional orders made by the Board of Trade under the General Pier and Harbour Act, 1861, relating to Cliftonville, Gillingham, Ilfracombe, Rosslare, and Saint Just, Mr. Lefevre and Mr. John Bright.

Commons: May 10, 1r.; 13, 2r.; June 1, referred to a Select Committee as regards Ilfracombe; 10, Committee reported (Ilfracombe order not confirmed); 11, Committee, and consolidated with No. 2 Bill (No. 161). *Lords:* June 17, 18, 25, 28. *Royal Assent*, July 12.

RAILWAYS ABANDONMENT (C), to amend the law relating to the abandonment of railways and the dissolution of railway companies, Mr. Shaw-Lefevre and Mr. Bright. (Authorises the winding-up of a company by a creditor.)

Commons: June 29, 1r.; July 5, 2r.; 16, Committee; 22, report; 23, 3r. *Lords:* Aug. 3, 5, 6, 7. *Royal Assent*, Aug. 9.

RAILWAY COMPANIES' MEETINGS (C), Mr. Shaw-Lefevre and Mr. Bright, to repeal so much of "The Regulation of Railways Act, 1868," as relates to the approval by meetings of bills and certificates for conferring further powers.

Commons' Stages: Apr. 1, 5, 6, 7. *Lords' Stages:* Apr. 8, 9, 12, 15. *Royal Assent*, Apr. 19.

SALMON FISHERIES (IRELAND) (C), the Attorney-General for Ireland and Mr. Fortescue, to amend the Act of 1863 and the Acts continuing its temporary provisions.

Commons: Mar. 16, 1r.; 19, 2r.; 22, Committee, amended; Apr. 6,

considered; Apr. 7, 3r.; 23, Lords' amendments agreed to. *Lords:* Apr. 8, 1r.; 12, 2r.; 16, 3r. and amended. *Royal Assent*, Apr. 19.

SEA FISHERIES ACT (1868) SUPPLEMENTAL (C), to confirm an order made by the Board of Trade under the Sea Fisheries Act, 1868, relating to Langston, Mr. Shaw-Lefevre and Mr. John Bright.

Commons: June 3, 1r.; 10, 2r.; 11, Committee; 14, report and 3r. *Lords:* June 15, 17, 24, 25. *Royal Assent*, July 12.

SEAMEN'S CLOTHING (L), to amend the law relating to the protection of seamen's clothing and property, the Earl of Camperdown.

Lords: July 12, 20, 22, 23. *Commons:* July 26, 29, 30. *Royal Assent*, Aug. 2.

*SEEDS ADULTERATION (C), to prevent the adulteration of seeds, Mr. Welby, Mr. Brand, Sir M. H. Beach, and Mr. Read.

Commons: Mar. 12, 1r.; June 16, 2r.; 23, referred to a Select Committee, which reported July 19; July 21, Committee; 29, 3r. *Lords:* July 30, Aug. 2, 5, 6, 7. *Royal Assent*, Aug. 9.

SHIPPING DUES EXEMPTION ACT (1867) AMENDMENT (C), Mr. Russell Gurney and Mr. Cowper.

Commons: June 28, July 5, 6, 7. *Lords:* July 8, 27, 29, 30. *Royal Assent*, Aug. 2.

SLAVE TRADE, BRAZILIAN (L), Earl of Clarendon, to repeal the Aberdeen Act, 8 & 9 Vict. c. 122.

Lords: Feb. 25, 1r.; Mar. 2, 2r.; 4, Committee; 8, 3r. *Commons:* Mar. 9, brought from the Lords, printed (Bill No. 58); 17, 1r.; 19, 2r.; 22, Committee; 23, 3r. *Royal Assent*, Apr. 19.

TRADES UNIONS (PROTECTION OF FUNDS) (C), to protect the funds of trades-unions from embezzlement and misappropriation, Mr. Secretary Bruce and Mr. Knatchbull-Hugessen.

Commons: July 13, 1r.; 19, 2r.; 22, Committee; 23, 3r. *Lords:* July 26, 30, Aug. 2, 3. *Royal Assent*, Aug. 9.

*WAREHOUSING OF WINES AND SPIRITS, &C. (C), to amend the law relating to the warehousing of wines and spirits in customs and excise warehouses, and for other purposes relating to customs and inland revenue, Mr. Stansfeld and the Chancellor of the Exchequer.

Commons: July 8, 19, Aug. 3, 4. *Lords:* Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

---

9. MISCELLANEOUS ACTS.

*BEERHOUSES, &C. (C), Messrs. Selwin-Ibbetson, Akroyd, and Headlam, to amend the law for licensing beerhouses, and make alterations with respect to the sale of beer, cider, and wine.

Commons: Feb. 26, 1r.; April 27, 2r.; May 11, committed to be reprinted as bill; 27, Committee; June 1, report; 7, 3r.; July 7, Lords' amendments agreed to. *Lords:* June 8, 11, 22, 24, July 5. *Royal Assent*, July 12.

BRUCE'S RESTITUTION (L), Lord Chancellor, to relieve Alexander Hugh Bruce, of Kennet, in the county of Clackmannan, Esq., and the heirs for the time being of the body of Michael, first Lord Balfour of Burley, in the peerage of Scotland, from the effect of the attainder of Robert, fifth Lord Balfour of Burley, signed by Her Majesty.

Lords' Stages: Feb. 25, Mar. 2, 4, 9. *Commons' Stages:* Mar. 9, 12; Select Committee, 16, 17. *Royal Assent*, Mar. 19.

GOVERNMENT OF INDIA ACT AMENDMENT (L), the Duke of Argyll, to reduce the tenure of office of members of the India Council to ten

years, with power to Secretary of State to reappoint for five years, and to grant pensions.

Lords: April 19, 1r.; 29, 2r. May 7, Committee; 13, report. June 4, 3r. *Commons:* June 8, 1r.; 21, 2r.; Aug. 5, Committee; 6, report and 3r. *Royal Assent*, Aug. 11.

GOVERNOR-GENERAL OF INDIA (L), Duke of Argyll, to define the powers of the Governor-General of India in Council at meetings for making laws and regulations, and to make better provision for making laws and regulations for certain parts of India; and for certain other purposes.

Lords: Feb. 26, 1r.; Mar. 11, 2r.; April 5, Committee; 9, amendment reported; 19, 3r. *Commons:* April 21, 1r.; June 21, 2r.; Aug. 5, Committee; 6, report and 3r. *Royal Assent*, Aug. 11.

INCLOSURE OF LANDS (C), Messrs. Hugessen and Bruce, to authorise the inclosure of certain lands, in pursuance of a report of the Inclosure Commissioners for England and Wales.

Commons: Mar. 11, 1r.; 22, Committee, amended; 23, considered; April 9, 3r. moved; Mr. Fawcett moved to recommit, for the purpose of reserving land for the poor—debate adjourned; July 19, debate resumed and bill recommitted; July 30, Committee (divisions); Aug. 3, report; 4, 3r. *Lords:* Aug. 6, 7, 9. *Royal Assent*, Aug. 11.

LANDS CLAUSES CONSOLIDATION ACT AMENDMENT (C), Messrs. Bazley, Jacob Bright, Graves, Baines, Dixon, and Hibbert, to amend the Lands Clauses Consolidation Act, so far as relates to the settlement of the costs of arbitration.

Commons: Mar. 3, 1r.; 11, 2r.; 16, through Committee; 22, considered; 23, 3r.; May 13, Lords' amendments agreed to with amendments. *Lords:* April 5, 1r.; 23, 2r.; 30, Committee; May 3, report; 4, 3r. *Royal Assent*, June 24.

LORD NAPIER OF MAGDALA [Salary] (C), Mr. Dodson (as chairman of Committee) Mr. G. Duff, and Mr. Stansfeld, to enable Lord Napier to receive salary as member of the Bombay Council, or as holding any other office, in addition to his annuity.

Commons: Mar. 15, resolution; 16, 1r.; 18, 2r.; 19, Committee; 22, 3r. *Lords' Stages:* April 5, 6, 8, 9. *Royal Assent*, April 19.

*NEWSPAPERS, PRINTERS AND READING ROOMS (C), Mr. Ayrton and Mr. Lowe, to repeal certain enactments relating to newspapers, pamphlets, and other publications, and to printers, typefounders, and reading-rooms.

Commons: April 8, 1r.; 15, 2r.; 22, Committee, amended; 23, considered; 26, 3r. *Lords:* April 27, May 31, June 18, 21, 25. *Royal Assent*, July 12.

*SAVINGS BANKS AND POST-OFFICE SAVINGS BANKS (C), to amend the law, Mr. Stansfeld and the Chancellor of the Exchequer.

Commons: July 7, 16, 19, 20. *Lords:* July 22, 29, 30. *Royal Assent*, Aug. 9.

*SEA-BIRDS' PRESERVATION (C), Messrs. Sykes, Clay, and Jackson.

Commons: Mar. 1, 1r.; 5, 2r.; 18, through Committee and to be reprinted as Bill No. 59; April 9, considered and further amended; 12, 3r. *Lords:* April 13, 1r.; 26, 2r.; May 4, Committee, amended; 10, report; 11, 3r. *Royal Assent*, June 24.

ABSTRACTS OF IMPORTANT ACTS OF PARLIAMENT

PASSED IN THE FIRST SESSION OF THE TWENTIETH PARLIAMENT OF GREAT BRITAIN AND IRELAND.

1. ARMY AND NAVY.

MILITIA.

[32 Victoriæ, cap. 13.—May 13, 1869.]

An Act for amending the Law relating to the Militia.

The preamble states that, "Whereas it is expedient to make better provision for the united action of Her Majesty's regular forces and the militia, at times when they are associated together for the purpose of training and exercise, and further to amend the law relating to the militia: Be it enacted," &c., in four clauses: "1. Her Majesty and the Lord-Lieutenant or Chief Governor of Ireland may exercise the same power of placing any regiment, battalion, or corps of militia called out for training and exercise under the command of general officers of the regular forces as Her Majesty now has, under the statutes regulating the respective militias of England, Scotland, and Ireland, of placing any such regiment, battalion, and corps under such command when the militia is drawn out, or embodied for actual service under the same statute. 2. Her Majesty may, upon the requisition of the Lord-Lieutenant, attach any officer of the regular forces to any regiment, battalion, or corps of militia during, and for the purpose of assisting in, the training and exercise thereof; and such officer, while so attached, shall obey the commands of the superior officers in the militia as his superior officers, and exercise all the power and authority of a militia officer in such regiment, battalion, or corps, but retain the same relative rank with respect to the officers of militia as an officer of Her Majesty's regular forces is entitled to according to the regulations of the service. 3. From and after the passing of this Act, an officer of the militia shall not be required to have any property qualification. 4. No militia volunteer who has, before or after the passing of this Act, received pay and been borne on the strength and pay-list of any regiment of militia for one whole period of training and exercise, shall be entitled to claim his discharge on the ground of error or illegality in his enrolment or re-enrolment, or on any ground whatsoever; but, on the contrary, every such volunteer shall be deemed to have been duly enrolled or re-enrolled, as the case may be."

MILLBANK PRISON.

[32 and 33 Victoriæ, cap. 95.—August 11, 1869.]

An Act to enable Military Prisoners to be confined in Millbank Prison.

By this Act, "any military prisoner may be sent, removed, or transferred to the Millbank Prison for the purpose of undergoing his sentence;" and "any military prisoner so confined shall, during his continuance in such prison, be subject to the Millbank Acts, in the same manner as if he were a convict in the custody of the governor in pursuance of the Millbank Acts." It is further enacted, that "before any military prisoners are received into the Millbank Prison, the Commis-

sioners of the Treasury shall determine the rate to be charged for the maintenance of such prisoners, and out of what funds such rate is to be defrayed."

NAVAL STORES.

[32 Victoriæ, cap. 12.—May 13, 1869.]

An Act for Protection of Naval Stores.

By this Act certain marks—more specifically "a blue line in a serpentine form," and "the broad arrow"—may be applied by the Admiralty on naval stores, "in order to denote Her Majesty's property in stores so marked;" and "if any person without lawful authority applies any of those marks, he shall be guilty of a misdemeanour, and shall, on conviction thereof, be liable to be imprisoned for any term not exceeding two years." Furthermore, "if any person, with intent to conceal Her Majesty's property in any stores taken out, destroys or obliterates any such mark, he shall be guilty of felony, and on conviction thereof be liable to be kept in penal servitude for any term not exceeding five years." Constables have power to search vessels, &c. suspected of containing purloined naval stores. The Act repeals "The Naval Stores Act, 1867." It does not extend to Scotland or Ireland.

VOLUNTEER ACT AMENDMENT.

[32 and 33 Victoriæ, cap. 81.—August 9, 1869.]

An Act to amend "The Volunteer Act, 1863."

The Act orders that, "where any person neglects or refuses, on demand made by properly authorised officers, to deliver up any property, whether arms, clothing, appointments, ammunition, or public stores, which is public property, or the property of a volunteer corps, or administrative regiment, and has been issued to such person, or is in his possession or keeping," any justice of the peace may issue a search-warrant for such property, and have it seized, "and remove the same to such place as may be directed by the Secretary of State, officer, or adjutant who made the demand." The Act is to be "construed as one with 'The Volunteer Act, 1863,' of which it is an amendment."

---

2. CHURCH AND EDUCATION.

BISHOPS' RESIGNATION.

[32 and 33 Victoriæ, cap. 111.—August 11, 1869.]

An Act for the Relief of Archbishops and Bishops when incapacitated by Infirmity.

The Act contains sixteen sections, and its duration is for two years, but all matters done thereunder are to be valid. As to the resignation of a bishop, it is provided that on a representation being made to Her Majesty in the manner mentioned—that is, by the archbishop of the province at the instance of the bishop—of a bishop in England being desirous of resigning, by reason that he is incapacitated by age or infirmity, it shall be lawful for Her Majesty, if satisfied of such incapacity, and that the bishop has canonically resigned, by Order in Council to declare such bishopric to be vacant, and thereupon such vacancy may be filled up, in the same manner, and with the same incidents in all respects, as if such bishop was dead, with certain exceptions specified:—1. There shall be paid by the year to the retiring bishop, out of the revenue of the see and as the first-charge thereon—either of the two sums as may be

the greater—one-third part of the income enjoyed by the bishop when he retired, or 2000*l.* a year to accrue due from day to day, but to be payable half-yearly: provided that, if in the case of the retirement of a bishop appointed before 1832, the excess of 2000*l.* a year is to be paid by the Ecclesiastical Commissioners out of their common fund; 2. Her Majesty may, upon special grounds, by Order in Council, assign to the retiring bishop any episcopal residence hitherto occupied by him; and 3. With the exception of the necessary expenses of his election and consecration, the bishop is not to be required to pay the fees and charges usually payable on accession, until the death of the retiring bishop. The Act is to apply to the bishopric of Sodor and Man, and also, under certain additions and exceptions, to archbishops, when incapacitated by reason of permanent mental infirmity from the due performance of their duties.

ENDOWED SCHOOLS.

[32 and 33 Victoriæ, cap. 56.—August 2, 1869.]

An Act to amend the Law relating to Endowed Schools and other Educational Endowments in England, and otherwise to provide for the Advancement of Education.

The Act consists of fifty-two clauses, divided into two parts. The first part contains the temporary provisions for the reorganisation, by Commissioners, of endowed schools needing reform; the second part consists of permanent provisions for the appointment of an Educational Council, the examination of masters before their appointment to endowed schools, and the periodical examination of the scholars, and also of scholars in private schools if registered with the Educational Council. Excepted from the operation of the Bill are schools maintained wholly or partly by annual subscriptions, and having no endowment except schoolhouse or residence; endowments for the education of ministers of any church or religious denomination, or for teaching any particular profession; and choristers' schools. A clause enacts that in framing schemes under this Bill, provision shall be made, so far as conveniently may be, for extending to girls the benefits of endowments. Another clause provides that in any scheme relating to an endowed school, the Commissioners shall take into consideration the rights of patronage of any member of the governing body in consequence of any donation made by him. The prohibition against interfering with modern endowments without consent is extended to endowments given within the last fifty years; and the constitution of the governing body of Quakers' schools and Moravian schools is not to be interfered with unless by consent. The Conscience Clauses are not to apply to cathedral or collegiate church schools, nor to endowments which by express terms require the scholars to be instructed according to the doctrines or formularies of any particular church or denomination. A further clause enacts that in every scheme the Commissioners shall provide for the dismissal at pleasure of every teacher and officer in the endowed schools, "with or without a power of appeal in such cases, and under such circumstances as to the Commissioners may seem expedient." Some other clauses make provision for the apportionment of income in the case of mixed endowments, partly educational and partly for other charitable uses, which latter are not to be diverted from those uses by the new Act unless with the consent of the governing body. There is a clause relating to the application to education of non-educational charities, providing the same shall not require the consent of the Charity Commission; but it requires the consent of the governing body, and it provides that in

applying such endowments to education, due regard shall be had to the educational interests of the class of persons now benefited by these funds. The power of the governing body to appeal to the Queen in Council against a scheme exists in all cases where they consider that it has not due regard to any educational interests to which the Act requires due regard to be had, on the abolition, &c. of privileges to which a particular class of persons are entitled. A final clause provides that no new scheme of the Commissioners shall be submitted to the Committee of Council for approval, unless two at least of the Commissioners signify in writing their approval of it; but in other respects one Commissioner may act under this statute. By the general provisions of the Act the preparation of new or amended schemes for endowed schools is entrusted to the Commissioners; but by the thirty-second section they are restrained—in the case of endowments which for three years previous to January 1, 1869, exceeded 10,000*l.* a year, for twelve months; in the case of those which, similarly reckoned, exceeded 1000*l.* a year, for six months—from framing such schemes; and the preparation of them is, during the said periods, placed in the hands of the governing bodies, should they see fit to exercise the right. Schemes so prepared are to be submitted to the Commissioners, who must consider them before framing schemes of their own for the said schools, and are to be further dealt with as provided in the Act.

IRISH CHURCH.

[32 and 33 Victoriæ, cap. 42.—July 26, 1869.]

An Act to put an end to the Establishment of the Church of Ireland, and to make provision in respect of the Temporalities thereof, and in respect of the Royal College of Maynooth.

This important Act contains a preamble and seventy-two clauses. The preamble runs:—"Whereas it is expedient that the union created by Act of Parliament between the Churches of England and Ireland, as by law established, should be dissolved, and that the Church of Ireland, as so separated, should cease to be established by law, and that after satisfying, so far as possible, upon principles of equality as between the several religious denominations in Ireland, all just and equitable claims, the property of the said Church of Ireland, or the proceeds thereof, should be applied in such manner as Parliament shall hereafter direct; and whereas Her Majesty has been graciously pleased to signify that she has placed at the disposal of Parliament her interest in the several archbishoprics, bishoprics, benefices, cathedral preferments, and other ecclesiastical dignities and offices in Ireland: be it therefore enacted by the Queen's most excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows." Now come the clauses. Clause 1 orders that "this Act may be cited for all purposes as 'The Irish Church Act, 1869;' and clause 2, that 'On and after the first day of January, 1871, the said union, created by Act of Parliament between the Churches of England and Ireland, shall be dissolved, and the said Church of Ireland, hereinafter referred to as 'the said church,' shall cease to be established by law."

Clauses 3 to 9 treat of the constitution and powers of Commissioners, three in number, appointed by Parliament to carry the Act into effect, It is ordered by clause 3, that "the following persons, Viscount Monck, Right Honourable James Anthony Lawson, one of the justices of the Court of Common Pleas in Ireland, and George Alexander Hamilton,

Esquire, shall be constituted Commissioners under this Act: they shall hold office during Her Majesty's pleasure, and if any vacancy occurs in the office of any commissioner, by death, resignation, or incapacity, or otherwise, Her Majesty may, by warrant under the royal sign-manual, appoint some other fit person, being a member of either of the said churches or of the said United Church, to fill the vacancy." The Commissioners appointed under this Act shall be a body corporate, with a common seal, and a capacity to acquire and hold land for the purposes of this Act, and shall be styled "The Commissioners of Church Temporalities in Ireland." It is further enacted, by the same clause, that "Judicial notice shall be taken by all courts of justice of the corporate seal of the Commissioners, and any order or other instrument purporting to be sealed therewith shall be received as evidence without further proof."

The next six clauses (4 to 9) prescribe the organisation of the functions of the Commissioners, who are authorised to appoint a staff of officers, agents, and clerks, to act under them, and have power given of "making or enforcing any order whatever made by them for the purpose of carrying into effect the object of this Act." Furthermore, "all proceedings before the Commissioners shall in law be deemed to be judicial proceedings before a court of record." The salary of the Commissioners is fixed at two thousand pounds each per annum, and the duration of their functions at ten years.

The next four clauses (10 to 13) treat of the transfer of property and dissolution of ecclesiastical corporations of the Church of Ireland. It is enacted by clause 10, that "no person shall, after the passing of this Act, be appointed by Her Majesty or any other person or corporation, by virtue of any right of patronage or power of appointment now existing, to any archbishopric, bishopric, benefice, or cathedral preferment in or connected with the said Church." Clause 11 enacts that, "from and after the passing of this Act all property, real and personal, at the date of such passing vested in or belonging to the Ecclesiastical Commissioners for Ireland, is transferred to and vested in the Commissioners appointed under this Act, subject to all tenancies, charges, incumbrances, rights (including tenants' rights of renewal), or liabilities affecting the same, and the corporation of the Ecclesiastical Commissioners for Ireland is hereby dissolved." Clause 12 orders that "on the 1st of January, 1871, all property, real and personal, belonging to or in anywise appertaining to or appropriated to the use of any archbishopric, bishopric, benefice, or cathedral preferment in or connected with the said Church, or appropriated to the use of any cathedral corporation in Ireland, as defined by this Act, shall vest in the Commissioners, subject as hereinafter mentioned: that is to say—(1), In case of all such property, subject to any quitrents, headrents, leases, and other tenancies, charges, and incumbrances affecting the same; (2), In the case of any houses, buildings, farms, lands, churches, burial-grounds, or other corporeal hereditaments to which, or to the rent and profits of which, any archbishop, bishop, or person holding any such benefice, or cathedral preferment as aforesaid, may be entitled, subject to the life-interests of such archbishop, bishop, or person respectively; and such last-mentioned corporeal hereditaments shall, subject to the provision for commutation hereinafter contained, continue in such archbishop, bishop, or person respectively for their respective lives, with the same powers, rights, and authorities, and in the same manner as if this Act had not passed; (3), On the death or cessor of the interest of any

archbishop or bishop aforesaid, the tenants then holding directly under any such archbishop or bishop, where leases had been theretofore customarily renewable, shall have similar rights of renewal of their said leases." Clause 13 enacts that, "on the 1st of January, 1871, every ecclesiastical corporation in Ireland, whether sole or aggregate, and every cathedral corporation in Ireland, as defined by this Act, shall be dissolved; and on and after that day no archbishop or bishop of the said Church shall be summoned to or be qualified to sit in the House of Lords as such: provided that every present archbishop, bishop, dean, and archdeacon of the said Church shall during his life enjoy the same title and precedence as if this Act had not passed."

The next five clauses (14 to 18) treat in detail of the amount of compensation to be awarded to "persons deprived of income by this Act." Clause 14 contains the summary of the law of compensation, as follows: "The Commissioners shall, as soon as may be after the passing of this Act, ascertain and declare, by order, the amount of yearly income of which the holder of any archbishopric, bishopric, benefice, or cathedral preferment in or connected with the said Church, will be deprived by virtue of this Act, after deducting all rates and taxes, salaries of curates, payments to diocesan schoolmasters, and other outgoings to which such holder is liable by law, but not deducting income or property tax, and the Commissioners shall have regard to the prospective increase of such income by the falling-in or cessation of charges thereon; and the Commissioners shall pay each year to every such holder, so long as he lives and continues to discharge such duties in respect of his said archbishopric, bishopric, benefice, or preferment, as he was accustomed to discharge, or would, if this Act had not passed, have been liable to discharge, or any other spiritual duties in Ireland which may be substituted for them, with his own consent, and with the consent of the representative body of the said Church hereinafter mentioned, or, if not discharging such duties, shall be disabled from so doing by age, sickness, or permanent infirmity, or by any cause other than his own wilful default, an annuity equal to the amount of yearly income so ascertained."

The next four clauses (19 to 22) treat of the reconstruction of the Irish Church as a religious body unconnected with the State, or as "Powers of Church after passing of Act." Clause 19 enacts that, "from and after the passing of this Act there shall be repealed and determined any Act of Parliament, law, or custom whereby the archbishops, bishops, clergy, or laity of the said Church are prohibited from holding assemblies, synods, or conventions, or electing representatives thereto, for the purpose of making rules for the wellbeing and ordering of the said Church; and nothing in any Act, law, or custom shall prevent the bishops, the clergy, and laity of the said Church, by such representatives, lay and clerical, and to be elected as they (the said bishops, clergy, and laity) shall appoint, from meeting in general synod or convention, and in such synod or convention framing constitutions and regulations for the general management and good government of the said Church, and property and affairs thereof, and the future representation of the members thereof in diocesan synods, general convention, or otherwise." Clause 20 enacts that "the present ecclesiastical law of Ireland, and the present articles, doctrines, rites, rules, discipline, and ordinances of the said Church, with and subject to such modification or alteration as may be duly made therein according to the constitution of the said Church for the time being, shall be deemed to be binding on the mem-

bers for the time being thereof, in the same manner as if such members had mutually contracted and agreed to abide by and observe the same: provided always, that no alteration in the articles, doctrines, rites, or (save in so far as may be rendered necessary by the passing of this Act) in the formularies of the said Church, shall be binding on any ecclesiastical person now licensed as a curate or holding any archbishopric, bishopric, benefice, or cathedral preferment in Ireland, being an annuitant or person entitled to compensation under this Act, who shall, within one month after the making of such alteration, signify in writing to the Church body hereafter mentioned his dissent therefrom, so as to deprive such person of any annuity or other compensation to which under this Act he may be entitled." Clause 21 enacts that, "on and after the 1st of January, 1871, all jurisdiction, whether contentious or otherwise, of all the ecclesiastical, peculiar, exempt, and other courts and persons in Ireland at the time of the passing of this Act having any jurisdiction whatsoever exerciseable in any cause, suit, or matter, matrimonial, spiritual, or ecclesiastical, or in any way connected with or arising out of the ecclesiastical law of Ireland, shall cease; and on and after the 1st of January, 1871, the ecclesiastical law of Ireland, except in so far as relates to matrimonial causes and matters, shall cease to exist as law." Finally, clause 22 enacts that, "if at any time it be shown to the satisfaction of Her Majesty that the bishops, clergy, and laity of the said Church in Ireland, or the persons who, for the time being, may succeed to the exercise and discharge of the episcopal functions of such bishops, and the clergy and laity in communion with such persons, have appointed any persons or body to represent the said Church, and to hold property for any of the uses or purposes thereof, it shall be lawful for Her Majesty by charter to incorporate such body, with power, notwithstanding the statutes of mortmain, to hold lands to such extent as is in this Act provided, but not further or otherwise."

The remaining clauses (23 to 72) provide for all further details connected with the disestablishment of the Irish Church, and likewise order the repeal of the Maynooth Acts, giving compensation to the persons interested under it, as well as to nonconforming ministers who have profited by the grant "commonly called the *Regium Donum*," which is declared to be discontinued. One of the last clauses declares it to be "expedient" that the ultimate trust of surplus of Irish Church property shall be "appropriated mainly to the relief of unavoidable calamity and suffering," in a "manner Parliament shall hereafter direct."

NEW PARISHES AND CHURCH-BUILDING ACTS AMENDMENT.

[32 and 33 Victoriæ, cap. 94.—August 11, 1869.]

An Act to amend the New Parishes Acts and Church-buildings Acts.

The Act has fourteen clauses, the first seven of which deal with "pews or sittings, in any church or chapel," which it is made legal to surrender to the Ecclesiastical Commissioners for England under certain conditions. By clause 8, provision is made for the use of sites of churches pulled down, and the remaining parts define the rights and liabilities of patrons, as well as prescribe the mode of formation of new ecclesiastical districts. Pews and sittings may be surrendered to the bishop of the diocese of a church, or to the Ecclesiastical Commissioners, whether the church be consecrated or unconsecrated; and from the surrender all rights of ownership are to cease, and the pews and

fittings to become subject to the same laws, as to all rights and property therein, as the pews and fittings of ancient parish churches. The words "church" and "chapel" in the Act are to apply only to churches and chapels of the Established Church of England.

PRESENTATION OF BENEFICES BELONGING TO ROMAN CATHOLICS.

[32 and 33 Victoriæ, cap. 109.—August 11, 1869.]

An Act for repealing part of an Act of the First Year of the Reign of their Majesties King William and Queen Mary, intituled, "An Act to vest in the Two Universities the Presentations belonging to Papists," and for securing Uniformity in the Law relating to the Residence of Spiritual Persons upon their Benefices, and to the Penalties and Forfeitures consequent upon Non-residence.

The contents of this very short Act are summed up in the title. It has two clauses, the first repealing the statute of William & Mary, and the second ordering that "no proceeding shall be taken against any spiritual person for enforcing the residence of such person upon his benefice, or by reason of his non-residence on his benefice," except under the powers and provisions of the Act 1 & 2 Vict. cap. 106, called "An Act to abridge the Holding of Benefices in Plurality, and to make better Provision for the Residence of the Clergy."

TITLES OF RELIGIOUS CONGREGATIONS ACT EXTENSION.

[32 and 33 Victoriæ, cap. 26.—July 12, 1869.]

An Act to extend to Burial Grounds the Provisions of the Act of the Thirteenth and Fourteenth Years of Her Majesty, cap. 28, intituled "An Act to render more simple and effectual the Titles by which Congregations and Societies for Purposes of Religious Worship or Education in England and Ireland hold Property for such purposes."

The Act has but one clause, running as follows;—"Wherever freehold, leasehold, copyhold, or customary property in England or Wales has been or hereafter shall be acquired, by any congregation or society or body of persons associated for religious purposes, as a burial-ground, whether in use or closed, all the provisions in the said recited Act made applicable to a chapel, meeting-house, or other place of religious worship, shall be applicable to such burial-ground, and this Act and the said recited Act shall be construed as one Act: provided always, that nothing herein contained shall in any way interfere with the Burial Acts."

---

3. CRIME AND PAUPERISM.

HABITUAL CRIMINALS.

[32 and 33 Victoriæ, cap. 99.—August 9, 1869.]

An Act for the more Effectual Prevention of Crime.

The Act contains seventeen clauses, with three schedules annexed and is divided into six parts. The first part treats of convicts at large on license, and enacts that "any constable or police officer may, if authorised so to do in writing by a chief officer of police, without warrant, take into custody any convict who is the holder of a license granted under the Penal Servitude Acts of 1853, 1857, and 1864, or any of them, and whom he has reason to believe to be getting a livelihood by dishonest means, and may bring him before two or more justices of the

peace or a stipendiary magistrate. If it shall appear, from the facts proved before such justices or magistrate, that there are reasonable grounds for such belief, his license shall be forfeited in the same manner as if he had been convicted of an indictable offence, and the justices or magistrate before whom he is brought shall commit him to any prison within their or his jurisdiction, there to remain until he can conveniently be removed to some prison in which convicts under sentence of penal servitude may lawfully be confined, in order that he may there undergo the term of penal servitude to which he is liable. The second part of the Act orders the registration of criminals. It enacts that, "for the better supervision of criminals, a register of all persons convicted of crime in England shall be kept in London, under the management of the Commissioner of Police for the Metropolis, or of such other person as one of Her Majesty's Principal Secretaries of State may appoint; and in Dublin a like register shall be kept, under the management of the Commissioners of Police for the police district of Dublin metropolis, or of such other person as the Lord-Lieutenant or other Chief Governor or Governors of Ireland may appoint, in such form, with such evidences of identity, and containing such particulars, and subject to such regulations as may from time to time be prescribed by one of Her Majesty's Principal Secretaries of State in England, or in Ireland by the Lord-Lieutenant. All expenses incurred with the sanction of the Commissioners of the Treasury in keeping such register shall be paid out of moneys provided by Parliament." The third part of the Act directs the supervision by the police of any individual twice guilty of felony, and not punished with penal servitude. Such a person may at any time be punished with imprisonment, for a term not exceeding one year:—"First: If, on his being charged by a constable or police officer with getting his livelihood by dishonest means, he fails to make it appear to the justices or magistrate before whom he is brought that he is not getting his livelihood by dishonest means. Secondly: If he is found by any constable or police officer in any place, whether public or private, under such circumstances as to satisfy the justices or magistrate before whom he is brought that he was about to commit or to aid in the commission of any crime punishable on summary conviction or indictment, or was waiting for an opportunity to commit or aid in the commission of any such crime. Thirdly: If he is found by any person in or upon any dwelling-house, or any building, yard, or premises, being parcel of or attached to such dwelling-house, or in or upon any shop, warehouse, counting-house, or other place of business, or in any garden, orchard, pleasure-ground, or nursery-ground, without being able to account to the satisfaction of the justices or magistrate before whom he is brought for his being found on such premises." Furthermore, "any person charged with being guilty of any offence punishable on summary conviction under this section may be taken into custody by any constable or police officer without warrant."

There are special provisions in the Act for punishing persons who harbour thieves, as well as receivers of stolen goods. As regards the former, it is enacted that "every person who occupies or keeps any lodging-house, beer-house, public-house, or other place where exciseable liquors are sold, or place of public entertainment or public resort, and knowingly lodges or harbours thieves or reputed thieves, or knowingly permits or suffers them to meet or assemble therein, or allows the deposit of goods therein having reasonable cause for believing them to be stolen, shall be liable, on summary conviction, to a penalty not exceeding 10*l.*; and the justices or magistrate before whom he is brought may,

if they or he think fit, in addition to or in lieu of any penalty, require him to enter into recognisances, with or without sureties, for keeping the peace or being of good behaviour during twelve months." In respect to receivers of stolen goods, it is enacted that, "where any person who either before or after the passing of this Act has been previously convicted of any offence specified in the first schedule hereto, and involving fraud or dishonesty, is found in the possession of stolen goods, evidence of such previous conviction shall be admissible as evidence of his knowledge that such goods have been stolen; and in any proceedings that may be taken against him as receiver of stolen goods, or otherwise in relation to his having been found in possession of such goods, proof may be given of his previous conviction before evidence is given of his having been found in possession of such stolen goods. Any constable or police officer may, if authorised so to do in writing by a chief officer of police, enter any house, shop, warehouse, yard, or other premises in search of stolen goods, and make such search and seize and secure any property he may believe to have been stolen, in such manner as he would be authorised to do if he had a search-warrant." By clause 16 it is enacted that "the provisions of 'The Industrial Schools Act, 1861,' shall apply to all the children under the age of fourteen years of any woman who shall be convicted for the second time of any offence specified in the first schedule hereto, when such children shall at the time of the conviction be under her care and control, and have no visible means of subsistence." Finally, the 17th and last clause enacts, that "any dealer in old metals, as defined in 'The Old Metal Dealers' Act, 1861,' who shall, either personally, or by any servant or agent, purchase, receive, or bargain for lead, whether new or old, in any quantity at one time of less weight than 112 pounds, or who shall personally, or by any servant or agent, purchase, receive, or bargain for copper, whether new or old, in any quantity at one time of less weight than 56 pounds, shall be liable to a penalty of 5*l.*, to be recovered in the same manner as penalties incurred under the said recited Act are therein directed to be recovered."

PREVENTION OF GAMING.

[32 and 33 Victoriæ, cap. 87.—August 9, 1869.]

An Act to provide for the Prevention of Gaming in Public Places in Scotland.

The Act, which states in the preamble that "it is expedient that provision should be made for punishing idle and disorderly persons guilty of gaming, or of having in their possession instruments of gaming," consists of four clauses. The chief enactment, contained in clause 3, is that "all chain-droppers, thimblers, loaded-dice players, cardsharpers, and other persons of a similar description, who shall be found in any public place, or in any grounds open to the public, or in any public conveyance," and attempt there "to cozen and cheat any person," may be arrested, and on conviction be sent to prison for a term not exceeding sixty days, with superadded sentence, "to repay any money, or restore any property, which they may have obtained by any such offence." Failing the latter, the imprisonment may be extended to a further term not exceeding sixty days.

4. FINANCE AND TAXATION.

ASSESSED RATES.

[32 and 33 Victoriæ, cap. 41.—July 26, 1869.]

An Act for amending the Law with respect to the Rating of Occupiers for Short Terms, and the making and collecting of the Poor-Rate.

The Act, extending over twenty-two clauses, prescribes in detail the collection of poor-rates assessed upon occupiers of hereditaments held for short terms, amending in some particulars the former law upon the subject. By clause 3 it is enacted that, "in case the rateable value of any hereditament does not exceed 20*l.*, if situate in the metropolis, or 13*l.* if situate within the borough of Liverpool, or 10*l.* if within the city of Manchester or the borough of Birmingham, or 8*l.* if situate elsewhere, if the owner of such hereditament is willing to enter into any agreement in writing with the overseers, to become liable to them for the poor-rates assessed in respect of such hereditament, for any term not less than one year, the overseers may, subject to the control of the vestry, agree with the owner to receive the rates from him." In the next clause it is enacted, that "the vestry of any parish may from time to time resolve that the owners of all rateable hereditaments to which the foregoing section (3) of this Act extends, shall be rated to the poor-rate, instead of the occupiers," on condition of being allowed "an abatement or deduction of 15 per centum from the amount of the rate." The Act repeals 13 & 14 Victoriæ, cap. 99, with respect to the rating of small tenements. It does not extend to Scotland or to Ireland.

CUSTOMS AND INLAND REVENUE DUTIES.

[32 and 33 Victoriæ, cap. 14.—June 24, 1869.]

An Act to grant certain Duties of Customs and Inland Revenue, and to repeal and alter other Duties of Customs and Inland Revenue.

The Act contains thirty-nine clauses, with six schedules annexed. By the first three clauses the customs duties upon foreign ale, beer, spruce, and eau-de-cologne are altered, and it is enacted that malt extracts and essences may be imported in transit. Clause 4 repeals the duties on corn, grain, meal, flour, "and articles of the like character:" the repeal including, as specified, arrowroot, maccaroni, sago, semolina, tapioca, vermicelli, and similar substances. By clause 5, an abatement is made in the income-tax for the year commencing April 6, 1869, the duty becoming 5*d.* in the pound on profits arising from property, professions, trades, and offices, 2½*d.* in the pound on land in England, and 1¾*d.* on land in Ireland, all other provisions made previously remaining the same. Clause 7 enacts that no special assessors shall be appointed for the duties payable under schedules A and B of the income-tax, but that the ordinary inspectors and surveyors of taxes shall act as assessors, receiving a poundage of three halfpence. The next clause (No. 8) contains a most important alteration as regards the collection of taxes. It enacts that "the provisions made by any of the several Acts relating to the land-tax or the duties on inhabited houses, for the collection and payment of the land-tax or the said duties in quarterly payments or instalments, are hereby repealed; and the provisions made by any Act relating to the duties of income-tax for the collection and payment in quarterly instalments of the said last-mentioned duties, except such as are payable by way of deduction, or are

assessable in respect of railways, are also hereby repealed: and the land-tax assessed in England for the year commencing on the 25th of March, 1869, and ending on the 25th of March, 1870, and the duties on inhabited houses assessed in England for the year commencing on the 6th of April, 1869, and ending on the 5th of April, 1870, and the duties of income-tax assessed in England or Ireland for the year commencing and ending as last mentioned, shall be payable on or before the 1st of January, 1870; and the land-tax, and the duties on inhabited houses, and the duties of income-tax (except as aforesaid), in every assessment in England for every year subsequent to the 25th of March, 1870, or the 5th of April, 1870, as the case may be, and the said duties of income-tax (except as aforesaid) in assessment in Ireland for every year subsequent to the 5th of April, 1870, shall be payable on or before the 1st day of January in each year." Clause 11 enacts that "any tenement or part of a tenement occupied as a house for the purposes of trade only, or as a warehouse for the sole purpose of lodging goods, wares, or merchandise therein, or as a shop or counting-house, or being used as a shop or counting-house, shall be exempt from inhabited house-duties, although a servant or other person may dwell in such tenement or part of a tenement for the protection thereof." The next clause (No. 12) entirely repeals the percentage duty on fire-insurances.

The repeal and reduction of a number of assessed taxes is enacted by clauses 16 and 17. The taxes so repealed comprise the duty on hair-powder, licenses for the sale of coffee, tea, cocoanuts, chocolate, and pepper; licenses to let horses in Great Britain, licenses to let post-horses in Ireland, and hackney and stage-carriage licenses and duties. A large reduction of duties, with greatly simplified assessment, is enacted as regards male servants, carriages, horses, armorial bearings, and horse-dealers. Clause 18 fixes the new scale of duties as follows:—

"On and after the 1st day of January, 1870, there shall be granted, charged, levied, and paid, for the use of Her Majesty, her heirs and successors, in and throughout Great Britain, under and subject to the provisions and regulations in this Act contained, the following duties, that is to say:

	£	*s.*	*d.*
For every male servant	0	15	0
For every carriage—			
If such carriage shall have four or more wheels, and shall be of the weight of four hundredweight or upwards	2	2	0
If such carriage shall have less than four wheels, or, having four or more wheels, shall be of a less weight than four hundredweight	0	15	0
For every horse or mule	0	10	6
For armorial bearings—			
If such armorial bearings shall be painted, marked, or affixed on or to any carriage	2	2	0
If such armorial bearings shall not be so painted, marked, or affixed, but shall be otherwise worn or used	1	1	0
For every horse-dealer	12	10	0

And such duties respectively shall be paid annually upon licenses to be taken out under the provisions of this Act by the person who shall employ the servant, or shall keep the carriage, or horse, or mule, or shall wear or use the armorial bearings, or shall exercise or carry on the trade

of a horse-dealer. And such duties and licenses shall be excise duties and licenses, and shall be under the management of the Commissioners of Inland Revenue; and, subject to the provisions of this Act, all the powers, clauses, regulations, and directions contained in any Act relating to excise duties or licenses, or to penalties under Excise Acts, and now or hereafter in force, shall respectively be of full force and effect with respect to the duties and the licenses under this Act; and the penalties hereby imposed, so far as the same are applicable and consistent with the provisions of this Act, as fully and effectually as if the same had been herein specially enacted with reference to the said last-mentioned duties, licenses, and penalties respectively; and the said licenses shall be in such form, and shall be granted by such officer, as the said Commissioners shall direct, and shall be dated on the day of granting the same, and shall expire on the 31st day of December then next following."

The remaining clauses of the Act specify the mode of levying of the taxes assessed under the Act, it being ordered that the Commissioners of Inland Revenue "shall cause to be placed upon or near to the door of every church in Great Britain a printed or written notice setting forth the duties payable upon licenses required to be taken out under this Act, and stating from whom forms of declaration under this Act can be obtained by persons residing within the parish." A penalty of 20*l.* may be inflicted for neglect in not conforming with the provisions of the Act.

DIVIDENDS ON PUBLIC STOCKS.

[32 and 33 Victoriæ, cap. 104.—August 11, 1869.]

An Act for facilitating the Payment of Dividends on the Public Stocks, and for making Regulations with respect thereto.

The Act is in six clauses, those numbered 2 to 5 containing the purport of it. Clause 2 enacts: "It shall be lawful for the Governor and Company of the Bank of England, hereinafter called 'the bank,' from time to time, with the sanction of the Commissioners of the Treasury, to make arrangements for payment of dividends on any stocks by sending warrants through the post. Every such warrant shall be deemed to be a cheque on the said Governor and Company within the intent and meaning of the statute of the 21 & 22 Vict. c. 79." Clause 3 provides that "every stockholder desirous of having his dividend-warrants sent to him by post shall make a request accordingly in writing to the bank, such writing to be signed by him, and to be in form approved by the bank and by the said Commissioners, and shall give to the bank an address in the United Kingdom to which the letters containing such warrants are from time to time to be sent; and the posting by the bank of any letter addressed to a stockholder, at his request, at the address given by him to the bank, and containing a dividend-warrant, shall, as respects the liability of the bank, be equivalent to the delivery of such warrant to the stockholder himself." According to clause 4, "the half-yearly dividends due on any public stocks which at the time of the passing of this Act fall due on the 10th of October in each year, shall from and after the passing of this Act become due on the 5th of October instead of the 10th of October." By clause 5, "the Treasury may from time to time make regulations as to the mode in which the audit of the accounts relating to dividends on public stocks is to be held by the Commissioners for Auditing the Public Accounts, and may, if they think fit, dispense with such audit altogether."

[In consequence of this Act of Parliament, the Directors of the Bank

of England promptly issued, under date August, 1869, the following order, headed "Notice to Stockholders in the Public Funds":—

"TRANSMISSION OF DIVIDEND WARRANTS BY POST.—Any holder of stock in the public funds, residing within the United Kingdom, may have his dividend-warrant sent to his address by post, on filling-up and sending to the chief accountant of the Bank of England a form of application, which may be obtained at the Bank of England, at any of its branches, or at any money-order office. In the case of joint accounts, the application must be signed by all the members of the account, directing the warrant to be sent to one of them at a given address. Post dividend-warrants will be drawn to the order of the stockholder, and must be endorsed. They will be transmitted at his risk, but being crossed '& Co.,' will be payable only through a banker. Warrants issued under powers of attorney will not be transmitted by post. Any change of address must be immediately notified to the bank by the stockholder in sole accounts, or by the nominee in joint accounts. Applications for the transmission of warrants by post should be lodged at the bank as follows:—

For the January payment,					on or before the 1st December.
„	April	„	„	„	1st March.
„	July	„	„	„	1st June.
„	October	„	„	„	1st September.

Stockholders whose warrants are sent by post should give notice to the bank if they are not received on the day on which they ought to be delivered.

"PAYMENT OF DIVIDENDS ON PERSONAL APPLICATION AT THE BANK OF ENGLAND.—Holders of stock may, as heretofore, apply for their warrants personally, or by their attorney, and obtain payment in cash. They may also arrange for the receipt of their dividends free of charge at any of the branches, on application to the agent.

"STOCK CERTIFICATES.—Stock certificates, with coupons for the half-yearly dividends, may be obtained in exchange for inscribed stock, in multiples of 50*l*. The certificates will be issued to bearer; but if the owner should insert his name, he alone will be entitled to the stock."]

---

5. LAW AND JUSTICE.

BANKRUPTCY.

[32 and 33 Victoriæ, cap. 71.—August 9, 1869.]

An Act to consolidate and amend the Law of Bankruptcy.

The Act, which is to come into operation on the 1st of January, 1870, contains 136 clauses, divided into eight parts. Part the first, following the preamble, and embracing 13 clauses (6 to 18) treats of adjudication and vesting of property. It is enacted, by clause 6, that "a single creditor, or two or more creditors, if the debt due to such single creditor, or the aggregate amount of debts due to such several creditors, from any debtor, amount to a sum of not less than 50*l*., may present a petition to the Court, praying that the debtor be adjudged a bankrupt, and alleging as the ground for such adjudication any one or more of the following acts or defaults:—(1.) That the debtor has, in England or elsewhere, made a conveyance or assignment of his property to a trustee or trustees for the benefit of his creditors generally: (2.) That the debtor has, in England or elsewhere, made a fraudulent conveyance, gift, delivery, or transfer of his property, or of any part thereof: (3.) That

the debtor has, with intent to defeat or delay his creditors, done any of the following things: namely, departed out of England, or being out of England remained out of England; or being a trader departed from his dwelling-house, or otherwise absented himself; or begun to keep house; or suffered himself to be outlawed: (4.) That the debtor has filed in the prescribed manner in the court a declaration admitting his inability to pay his debts: (5.) That execution issued against the debtor on any legal process for the purpose of obtaining payment of not less than 50*l.* has, in the case of a trader, been levied by seizure and sale of his goods: (6.) That the creditor presenting the petition has served in the prescribed manner on the debtor a debtor's summons requiring the debtor to pay a sum due, of an amount of not less than 50*l.*, and the debtor being a trader has for the space of seven days, or not being a trader has for the space of three weeks, succeeding the service of such summons, neglected to pay such sum, or to secure or compound for the same." The clause goes on to enact, that "no person shall be adjudged a bankrupt on any of the above grounds, unless the act of bankruptcy on which the adjudication is grounded has occurred within six months before the presentation of the petition for adjudication; moreover, the debt of the petitioning creditor must be a liquidated sum due at law or in equity, and must not be a secured debt." Part the first further authorises the granting of debtors' summonses, and orders that after adjudication a trustee is to be appointed to administer the bankrupt's property.

The second part of the Act, embracing clauses 15 to 58, prescribes in detail the administration of property, and the terms and conditions of a bankrupt's discharge. The main points of the latter are under clause 48, which enacts that "when a bankruptcy is closed, or at any time during its continuance, with the assent of the creditors, testified by a special resolution, the bankrupt may apply to the Court for an order of discharge; but such discharge shall not be granted, unless it is proved to the Court that one of the following conditions has been fulfilled—that is to say, either that a dividend of not less than 10*s.* in the pound has been paid out of his property, or might have been paid except through the negligence or fraud of the trustee; or that a special resolution of his creditors has been passed to the effect that his bankruptcy, or the failure to pay 10*s.* in the pound, has, in their opinion, arisen from circumstances for which the bankrupt cannot justly be held responsible, and that they desire that an order of discharge should be granted to him." The position of a bankrupt who has not obtained his discharge is defined by clause 54. It enacts that, "where a person who has been made bankrupt has not obtained his discharge, then, from and after the close of his bankruptcy, the following consequences shall ensue: (1.) No portion of a debt proveable under the bankruptcy shall be enforced against the property of the person so made bankrupt until the expiration of three years from the close of the bankruptcy; and during that time, if he pay to his creditors such additional sum as will, with the dividend paid out of his property during the bankruptcy, make up 10*s.* in the pound, he shall be entitled to an order of discharge in the same manner as if a dividend of 10*s.* in the pound had originally been paid out of his property. (2.) At the expiration of a period of three years from the close of the bankruptcy, if the debtor made bankrupt has not obtained an order of discharge, any balance remaining unpaid in respect of any debt proved in such bankruptcy (but without interest in the meantime) shall be deemed to be a subsisting debt in the nature of a judgment-debt,

and, subject to the rights of any persons who have become creditors of the debtor since the close of his bankruptcy, may be enforced against any property of the debtor, with the sanction of the court which adjudicated such debtor a bankrupt, or of the court having jurisdiction in bankruptcy in the place where the property is situated."

The third part of the Act, embracing clauses 59 to 79, refers to the constitution and powers of the courts of bankruptcy already existing or to be established. It is enacted, under clause 59, that "from and after the commencement of this Act the following provisions shall take effect with respect to the courts having jurisdiction in bankruptcy, and their officers. If the person sought to be adjudged a bankrupt reside or carry on business within the London bankruptcy district as hereinafter defined, or be not resident in England, then 'the court' shall mean, for the purposes of this Act, the Court of Bankruptcy in London as constituted by this Act, and hereinafter referred to as the London Bankruptcy Court. If the person sought to be adjudged a bankrupt, being resident in England, do not reside or carry on business within the London bankruptcy district, then 'the court' shall, subject to the provisions hereinafter contained for removing the proceedings, mean the county court of the district in which such person resides or carries on business, hereinafter referred to as 'the local bankruptcy court.' It is further enacted, by clause 60, that 'the London bankruptcy district shall, for the purposes of this Act, comprise the following places: that is to say, the city of London and the liberties thereof, and all such parts of the metropolis and other places as are situated within the district of any county court described as a metropolitan county court in the list contained in the second schedule hereto." The next clause (61) runs: "The London Bankruptcy Court shall from and after the commencement of this Act consist of a judge, to be called the Chief Judge in Bankruptcy, and, subject to the provisions of this Act with respect to the officers of the existing London Bankruptcy Court, of such number of registrars not exceeding four, clerks, ushers, and other subordinate officers, as may be determined by the chief judge with the sanction of the Treasury. Subject to the provisions of this Act with respect to the appointment of the first chief judge, the office of Chief Judge in Bankruptcy shall be filled by such one of the judges of Her Majesty's superior courts of common law or of equity as may, with his assent, be assigned to hold such office by the Lord Chancellor; the judge so assigned shall hold the office of Chief Judge in Bankruptcy in addition to the office of judge in the court to which he belongs. Any puisne judge or vice-chancellor appointed to any of the said Courts after the passing of this Act shall, when required by the Lord Chancellor, perform the duties of Chief Judge in Bankruptcy." The fourth part of the Act, embracing clauses 80 to 119, contains supplemental regulations as to proceedings in bankruptcy; while the fifth part (clauses 120 to 124) treats of persons having privilege of Parliament. Such a person may be treated in the same manner as if he had no privilege. A seat in the House of Commons is to be vacated by an adjudication in bankruptcy, and the Speaker is to issue a new writ. There are various provisions in the sixth part of the Act on "liquidation by arrangement." The seventh part of the Act (clauses 126 and 127) refers to composition with creditors, and the eighth and last part (clauses 128 to 136) relates to temporary provisions as to the bankruptcy courts. Before the Act comes into force new rules and orders must be framed, and the business under the old and new law properly allotted. There is no "pre-audience," as it is called, under the new law

to barristers, as by the 70th section solicitors may appear before the chief judge or registrars in the London court, either in court or chambers. The Act, as already mentioned, is to come into operation on and from the 1st of January, 1870.

CHARITY COMMISSIONERS.

[32 and 33 Victoriæ, cap. 110.—August 11, 1869.]

An Act for amending the Charitable Trusts Acts.

The preamble states that "doubts have arisen respecting the construction of some of the provisions of the Charitable Trusts Acts," and that "it is expedient to remove such doubts, and otherwise to amend those Acts." There are seventeen clauses, dealing chiefly with the powers and mode of proceeding of the Board of Charity Commissioners for England and Wales, and its supervision by the Court of Chancery. Under the 12th clause, power is given to a majority of trustees, "at a meeting of their body duly constituted," to sell, or otherwise dispose of, charity estates; and under the 13th clause it is enacted, that "the majority of the trustees of any charity, if authorised by the Board, may institute and maintain any action, suit, petition, or other proceeding, in the same manner in all respects as if they were the sole trustees of the charity." There is a provision to extend the Acts which relate to the appointment or removal of trustees, to places of meeting registered for religious worship, and *bonâ fide* used as places of meeting for religious worship. The Treasury is empowered to prescribe a scale of fees to be charged by the Board of Charity Commissioners.

CLERKS OF ASSIZE.

[32 and 33 Victoriæ, cap. 89.—August 9, 1869.]

An Act to amend the Law relating to the Office of Clerk of Assize, and Offices united thereto, and to certain Fees upon Orders for Payment of Witnesses in Criminal Proceedings.

The chief provision of the Act is under clause 3, which directs that "after the passing of this Act a person shall not be appointed to be clerk of assize unless he has during a period of not less than three years been either—first, a barrister-at-law in actual practice; or, secondly, a special pleader or conveyancer; or, thirdly, an attorney of one of the superior courts at Westminster in actual practice; or, fourthly, a subordinate officer of a clerk of assize on circuit." The last clauses (9, 10, and 11) make provision as to the payment of fees, which "shall be included in every return made by a clerk of the peace or other officer."

COURTS OF JUSTICE SALARIES AND FUNDS.

[32 and 33 Victoriæ, cap. 91.—August 9, 1869.]

An Act for amending the Law relating to the Salaries, Expenses, and Funds of Courts of Law in England.

The Act orders that certain large sums belonging to the Court of Chancery and the Court of Bankruptcy shall be transferred to the Consolidated Fund, and the expenditure of the courts shall in future be defrayed out of moneys to be provided for that purpose by Parliament, or out of the Consolidated Fund. The charges on the stock and cash of the courts are set forth, and it is declared that as the charges are transferred, the stock and cash should be transferred to the public. Considerable funds in the Court of Chancery belonging to suitors are

not transferred. On the 1st of October, 1868, there was an account of 56,229,314*l.* 1*s.* 1*d.* belonging to suitors. In alluding to a sum of 2,762,744*l.* 1*s.* 10*d.*, it is stated that some portion "is unclaimed money, and will probably remain so." The Suitors' Fund and the Surplus Interest Fund are transferred, as also the Suitors' Fee Fund. Stock and cash in the Court of Bankruptcy are likewise transferred for the same reason, and the salaries of the judges, &c. are charged on the Consolidated Fund. Some of the stock is not transferred. The "unclaimed dividend account" is 221,361*l.* 4*s.* 11*d.*, and a large sum from the old Insolvent Debtors' Court. Among the sums transferred from the Court of Bankruptcy is 1,091,663*l.* 9*s.* 3*d.*, "unclaimed by creditors" of bankrupts and insolvents, besides other amounts. The Consolidated Fund will receive a great accession by the new Act. There are thirty-one statutes wholly or partially repealed by the Act; eleven took effect on the 1st of October, 1869.

DEBTS OF DECEASED PERSONS.

[32 and 33 Victoriæ, cap. 46.—August 2, 1869.]

An Act to abolish the Distinction as to Priority of Payment which now exists between the Specialty and Simple Contract Debts of Deceased Persons.

The preamble states that "it is expedient to abolish the distinction as to priority of payment between specialty and simple contract debts of deceased persons." Therefore it is enacted, that "in the administration of the estate of every person who shall die on or after the 1st of January, 1870, no debt or liability of such person shall be entitled to any priority or preference by reason merely that the same is secured by or arises under a bond, deed, or other instrument under seal, or is otherwise made or constituted a specialty debt; but all the creditors of such person, as well specialty as simple contract, shall be treated as standing in equal degree, and be paid accordingly out of the assets of such deceased person, whether such assets are legal or equitable, any statute or other law to the contrary notwithstanding: provided always, that this Act shall not prejudice or affect any lien, charge, or other security which any creditor may hold or be entitled to for the payment of his debt." The Act does not extend to Scotland.

ELECTION COMMISSIONERS' EXPENSES.

[32 and 33 Victoriæ, cap 21.—June 24, 1869.]

An Act to amend the Law relating to the Payment of the Expenses of Commissioners of Inquiry into Corrupt Practices at Election of Members to serve in Parliament.

The Act, consisting of seven clauses, throws the payment of expenses incurred in inquiries for corrupt practices at elections wholly upon the ratepayers of the districts where the inquiries take place. By the Parliamentary Election Act the expenses of such an inquiry are to be defrayed as if they were expenses incurred in the registration of voters for the county or borough in respect of which Commissioners of Inquiry were appointed. The Treasury is empowered to advance money for the payment of the expenses of commissions, and the Commissioners of the Treasury are to require repayment within one year from the local officer of the county, city, or borough, and rates are to be levied for the collection of the money by the inhabitants. There are provisions as to the payment of expenses of commissions in Scotland and Ireland. The

Act is to continue in force for two years, and to the end of the then next Session of Parliament.

EVIDENCE AMENDMENT.

[32 and 33 Victoriæ, cap. 68.—August 9, 1869.]

An Act for the further Amendment of the Law of Evidence.

The preamble of the Act, which has six clauses, declares that the discovery of truth in courts of justice has been signally promoted by the removal of restrictions on the admissibility of witnesses, and it is expedient to amend the law of evidence with the object of still further promoting such discovery. It is enacted, that parties in any action for breach of promise of marriage are competent to give evidence, provided "that no plaintiff in any action for breach of promise of marriage shall recover a verdict unless his or her testimony shall be corroborated by some other material evidence in support of such promise." The law is altered as to suits for adultery, and it is enacted, by clause 3, that "the parties to any proceeding instituted in consequence of adultery, and the husbands and wives of such parties, shall be competent to give evidence in such proceeding: provided that no witness in any proceeding, whether a party to the suit or not, shall be liable to be asked, or bound to answer, any question tending to show that he or she has been guilty of adultery, unless such witness shall have already given evidence in the same proceeding in disproof of his or her alleged adultery." With respect to persons who object to take an oath, there is the following provision in clause 4:—"If any person called to give evidence in any court of justice, whether in a civil or criminal proceeding, shall object to take an oath, or shall be objected to as incompetent to take an oath, such person shall, if the presiding judge is satisfied that the taking of an oath would have no binding effect on his conscience, make the following promise and declaration: 'I solemnly promise and declare that the evidence given by me to the Court shall be the truth, the whole truth, and nothing but the truth;' and any person who, having made such promise and declaration, shall wilfully and corruptly give false evidence, shall be liable to be indicted, tried, and convicted for perjury as if he had taken an oath." The Act, which repeals some sections in former statutes, is not to extend to Scotland.

IMPRISONMENT FOR DEBT.

[32 and 33 Victoriæ, cap. 62.—August 9, 1869.]

An Act for the Abolition of Imprisonment for Debt, for the Punishment of Fraudulent Debtors, and for other Purposes.

The Act, which has twenty-nine clauses, divided into three parts, is a companion statute to the New Bankruptcy Act. [See above, pp. 233–36.] Like the latter, it is coming into operation on the 1st of January, 1870, from which time no person is to be arrested or imprisoned for making default in payment of a sum of money, with certain exceptions as to penalties other than in respect of a contract. The exception extends to payment of sums recoverable before justices, to a trustee or other person ordered to pay by a court of equity a sum in his possession or under his control, to an attorney ordered to pay costs for his conduct, or for default in payment for the benefit of creditors of any portion of a salary or other income in respect of the payment of which any court having jurisdiction in bankruptcy is authorised to make an order. The exception to the abolition also extends to default in payment of sums of

which orders under this Act are authorised to be made. No imprisonment in the excepted instances is to be for a longer period than one year. With respect to small debts, subject to the prescribed rules, any court may commit for a term not exceeding six weeks, or until payment, any person who makes default in payment of any debt or instalment of any debt due from him in pursuance of any order or judgment of that or any other competent court. The commitment other than by the superior courts of law and equity can be exercised only by a judge or his deputy, and by an order made in open court, and showing on its face the ground on which it is issued; it can also be exercised only as respects a judgment of a superior court, when such judgment does not exceed 50*l.* exclusive of costs, and furthermore be exercised only as respects a judgment of a county court by a county-court judge or his deputy. It is enacted, "that such jurisdiction shall only be exercised where it is proved to the satisfaction of the court that the person making default either has, or has had since the date of the order or judgment, the means to pay the sum in respect of which he has made default, and has refused or neglected, or refuses or neglects, to pay the same." The debtor and witness may be examined as to his means; the jurisdiction in the superior courts may be exercised by a judge at chambers. The imprisonment is not to satisfy the debt, and the party to be discharged on a certificate that he has paid the debt, and the imprisonment is not to prevent an execution on the goods being taken out. After the commencement of the Act no person is to be arrested on *mesne* process, but, under certain circumstances, the power of arrest is retained where a defendant is about to leave the country. At the commencement of the operation of this Act, persons who would be exempted from imprisonment under this Act are to be discharged without the payment of fees, but the rights of creditors on property are preserved. Sequestration against the property of a debtor may, after the commencement of this Act, be issued by any court of equity in the same manner as if the debtor had been actually arrested. The second part of the Act relates to the punishment of "fraudulent debtors," either bankrupts or others, whose affairs are in liquidation, in the concealment or removal of property, or allowing false debts to be proved, or making false entries. The period is "four months," and a conviction is to follow, unless the jury is satisfied that he had no intent to defraud. To abscond with property to the amount of 20*l.* from England within four months is to be a felony, and the offender is liable to two years' imprisonment with or without hard labour. The obtaining credit by fraud, or making over property, or concealing or removing property, within two months, is to be a misdemeanour, and the offender to be liable to twelve months' imprisonment with or without hard labour. The Court of Bankruptcy may order a prosecution on the report of a trustee. Quarter-sessions are to have jurisdiction for offences under this Act. Mayors, aldermen, and town-councillors being declared bankrupts, or compounding by deed, are disqualified; and justices of the peace becoming bankrupt, or making assignments or compositions, are incapable of acting. The third part of the statute has reference to warrants of attorney, cognovits, and orders of judgment. The abolition of imprisonment extends to damages for breach of promise of marriage, seduction, and slander. Persons in prison on the 1st of January, 1870, who could not have been arrested had the Act been passed, have to apply to a judge at chambers. The Act does not extend to Scotland or Ireland.

INSOLVENT DEBTORS AND BANKRUPTCY REPEAL.

[32 and 33 Victoriæ, cap. 83.—August 9, 1869.]

An Act to provide for the Winding-up of the Business of the late Insolvent Debtors' Court, and to repeal Enactments relating to Insolvency, Bankruptcy, Imprisonment for Debt, and matters connected therewith.

The Act, like the preceding "Act for the Abolition of Imprisonment for Debt," is a companion of the New Bankruptcy Act, and is coming into operation also on the 1st of January, 1870. There are thirty-seven statutes, from the 13th of Edward I. to the 31st & 32nd of Victoria, in part or wholly repealed by this Act. The Bankruptcy Act of 1861, which abolished the old Insolvent Debtors' Court, is repealed, and the system of the insolvency law which was got rid of by that statute as to payment to creditors is partially revived by the New Bankruptcy Act, and the principle as to payment out of subsequent property is recognised. By the new Act the jurisdiction of the late Insolvent Debtors' Court and the county courts in insolvency is transferred to the new court, and rules may be made to wind-up the old cases. The officers of the old Insolvent Debtors' Court are to be continued, subject to the provisions in the new Act, and their salaries and remuneration provided for. Every insolvency case is to expire in twelve months from the commencement of the Act, or at the expiration of twenty years from the date of the petition, whichever happens first, but, under special circumstances, a case may be extended. After five years all unclaimed money (the amount of which will be large) is to vest in the Crown, and to be disposed of as the Treasury directs.

RECORDERS' DEPUTIES.

[32 and 33 Victoriæ, cap. 23.—July 12, 1869.]

An Act to extend the Powers of Recorders to appoint Deputies in certain cases.

The Act enables the recorder of any borough in England and Wales "in which, by charter, custom, or otherwise, there is or ought to be holden courts of record for the trial of civil actions," to appoint a deputy "in case of sickness or unavoidable absence." The deputy must be a barrister of not less than five' years standing, and be approved of by the Home Secretary.

SPECIAL BAILS.

[32 and 33 Victoriæ, cap. 38.—July 26, 1869.]

An Act to facilitate the taking Special Bails in Civil Proceedings depending in the Superior Courts of Law at Westminster, and in Proceedings in Error and on Appeal.

The Act authorises all persons empowered to take affidavits in common law courts also to take bails, "whether they are or are not attorneys or solicitors." But there is this exception, that "no attorney or solicitor shall exercise any of the powers given by this Act in any proceeding in which he is the attorney or solicitor of any of the parties to that proceeding, or in which he is interested."

---

6. LOCAL GOVERNMENT.

FINES AND FEES COLLECTION.

[32 and 33 Victoriæ, cap. 49.—August 2, 1869.]

An Act to enable Local Authorities to collect Fines and Fees by means of Stamps.

The Act, which is in seven clauses, provides an entirely new mode of

collecting fines, fees, and penalties payable to local authorities. It enacts that when clerks of special and petty sessions and clerks of justices are paid wholly or partly by salaries, by virtue of an order made under the Expenses of Prosecutions Act of 1851, it shall be lawful for the Quarter Sessions or Town Council, if they think fit, to order that fees, fines, and penalties payable to the treasurer of the county or borough shall be received by means of stamps and not in money, "and to cause such dies to be made as may be required for the purpose of carrying this bill into effect"—the Inland Revenue Board assenting to the pattern, colour, and form of the stamps and dies. Persons may be authorised by the Quarter Sessions or Town Council to sell the stamps, upon such terms and conditions as they shall direct, and none others may sell such stamps.

HACKNEY AND STAGE CARRIAGES LAW AMENDMENT.

[32 and 33 Victoriæ, cap. 115.—August 11, 1869.]

An Act for amending the Law relating to Hackney and Stage Carriages within the Metropolitan Police District.

The Act, consisting of fifteen clauses, gives power to "one of Her Majesty's Principal Secretaries of State" to grant licenses to owners and drivers of hackney and stage carriages, as well as to make regulations for them. Licenses may be granted to cabs and other hackney and stage carriages, to be distinguished in such manner as the Secretary of State may direct. The license, unless revoked, is to be for a year, and the fee not to exceed two guineas, and may be transferred under conditions. A penalty of 5*l.* may be levied for an unlicensed carriage. Drivers and conductors are to be licensed. The Secretary of State may regulate the number of persons to be carried, to fix the rates and fares; and no hackney-carriage is to be compelled to take any passenger a greater distance for any one drive than six miles. Penalties are to be levied for breach of the regulations. Any license grantable by the Secretary of State may, if so directed by him, be granted by any person he may appoint, and proper officers may be appointed to carry the Act into execution. The penalties are to be summarily recovered, and all existing Acts are to be continued. The Commissioners of the Metropolitan Police may cause to be attached to any lamp-post any placard or signal for the purposes of carrying out the Act. Lighted lamps are to be exhibited outside hackney-carriages. The Act is coming into operation on the 1st of January, 1870.

HIGH CONSTABLE'S OFFICE ABOLITION.

[32 and 33 Victoriæ, cap. 47.—August 2, 1869.]

An Act to provide for the Discharge of the Duties heretofore performed by High Constables, and for the Abolition of such Office, with certain Exceptions.

The Act makes it "the duty of the justices of the peace for every county in quarter-sessions assembled, in the month of January after the passing of this Act, to consider and determine whether it is necessary that the office of high constable of each hundred, or other like district within their jurisdiction, should be continued." Having determined that it is not necessary, the next vacancy is not to be filled up. Exception is made in the case of any high constable in England and Wales who is likewise returning-officer at parliamentary or municipal elections, or of any "in whom is vested by virtue of his office any real property."

MUNICIPAL FRANCHISE.

[32 and 33 Victoriæ, cap. 55.—August 2, 1869.]

An Act to shorten the Term of Residence required as a Qualification for the Municipal Franchise, and to make provision for other Purposes.

The Act, which has eleven clauses, repeals the ninth section of the statute of 5 & 6 Will. IV. cap. 76, regulating municipal franchise, and enacts instead, "that every person of full age who on the last day of July in any year shall have occupied any house, warehouse, counting-house, shop, or other building within any borough during the whole of the preceding twelve calendar months, and also during the time of such occupation shall have resided within the said borough, or within seven miles of the said borough, shall, if duly enrolled in that year according to the provisions contained in the said Act of the session of the 5 & 6 Will. IV., cap. 76, and the Acts amending the same, be a burgess of such borough and member of the body-corporate of the mayor, aldermen, and burgesses of such borough: provided that no such person shall be so enrolled in any year unless he shall have been rated in respect of such premises so occupied by him within the borough to all rates made for the relief of the poor of the parish wherein such premises are situated during the time of his occupation as aforesaid, and unless he shall have paid on or before the 20th of July in such year all such rates, including therein all borough rates: provided also, that no person being an alien shall be so enrolled in any year, and that no person shall be so enrolled in any year who, within twelve calendar months next before the said last day of July, shall have received parochial relief or other alms." The 9th clause of the Act provides that, "wherever words occur in this Act, or the Act of 5 & 6 Will. IV. cap. 76, which import the masculine gender, the same shall be held to include females for all purposes connected with, and having reference to, the right to vote in the election of councillors, auditors, and assessors." The Act is not to apply to Scotland or Ireland.

---

7. PUBLIC WORKS.

TELEGRAPHS.

[32 and 33 Victoriæ, cap. 73.—August 9, 1869.]

An Act to alter and amend the Telegraph Act of 1868.

The preamble, referring to the Telegraph Act of 1868 (see "Companion to the Almanic for 1869," pp. 146–7) states that, "in order to protect the public revenue, it is expedient that similar powers to those conferred upon the Postmaster-General with respect to the exclusive privilege of conveying letters should be enacted with reference to the transmission of public telegraphic messages within the United Kingdom of Great Britain and Ireland, and that the said Act should be amended in other respects." The statute, which is in twenty-four clauses, with a schedule annexed, then goes on to enact that "the Postmaster-General, by himself or by his deputies, and his and their respective servants and agents, shall, from and after the passing of this Act, have the exclusive privilege of transmitting telegrams within the United Kingdom of Great Britain and Ireland, except as hereinafter provided; and shall also within that kingdom have the exclusive privilege of performing all the incidental services of receiving, collecting, or delivering telegrams, except as hereinafter provided." It is further enacted, that "there shall be excepted from the said exclusive privileges of the Postmaster-General

all telegrams of the following descriptions:—Telegrams in respect of the transmission of which no charge is made, transmitted by a telegraph maintained or used solely for private use, and relating to the business or private affairs of the owner thereof: telegrams transmitted by a telegraph maintained for the private use of a corporation, company, or person, and in respect of which, or of the collection, receipt, and transmission or delivery of which, no money or valuable consideration shall be, or promised to be, made or given: telegrams transmitted, with the written license or consent, either special or general, of the Postmaster-General, under the hand of any officer of the Post Office, authorised for that purpose by the Postmaster-General: telegrams transmitted by a telegraph company existing on the 22nd of July, 1869, the undertaking of which shall not for the time being have been acquired by the Postmaster-General: telegrams the transmission of which is authorised by the provisions of 'The Telegraph Act, 1868,' or any agreement confirmed thereby, or made or to be made in pursuance thereof; and telegrams transmitted to or from any place out of the United Kingdom of Great Britain and Ireland." A penalty of 5*l.* is set upon every case of breach of the monopoly. By a further clause of the Act, the Commissioners of the Treasury are empowered to raise the sum of seven millions sterling by the creation of terminable annuities, to pay for expenses already incurred, or calculated upon, in the purchase and working of the telegraphs. The sums agreed to be paid to the various telegraph companies with whom arrangements have already been made by the Postmaster-General are thus specified:—

Names of Telegraph Companies with whom arrangements have been made pursuant to the Telegraph Acts.	Amounts payable to Telegraph Companies under the Telegraph Acts.		
	£	*s.*	*d.*
The Electric and International Telegraph Company .	2,938,826	9	0
The British and Irish Magnetic Telegraph Company (Limited)	1,243,536	0	0
Reuter's Telegram Company (Limited) . .	726,000	0	0
The United Kingdom Electric Telegraph Company (Limited)	562,264	9	11
The Universal Private Telegraph Company . .	184,421	10	0
The London and Provincial Telegraph Company (Limited)	60,000	0	0
	5,715,048	8	11

It is enacted, under clause 19, that "the gross revenue received by the Postmaster-General for the transmission of messages by means of electric telegraphs shall be paid into the Exchequer to the account of the Consolidated Fund; and the expenses incurred, with the sanction of the Commissioners of Her Majesty's Treasury, in working, maintaining, or extending telegraphs, shall be paid out of moneys to be voted by Parliament." The next clause (20) orders: "There shall be laid before both Houses of Parliament, on or before the 31st of March in every year, an account showing the gross amount received during the previous year ending the 31st of December, the amount of expenses incurred during the year, and the balance remaining applicable to pay the annuities, or the interest falling due upon the securities issued under the authority of this Act, and as a sinking fund for the redemption of such securities; and the surplus remaining, after deducting the amount of such expenses and of such annuities and interest, shall be issued out of the Consoli-

dated Fund, or the growing produce thereof, to the Commissioners for the Reduction of the National Debt, to be applied in reduction of debt to an amount equivalent to that created by the annuities or securities issued under the provisions of this Act." The last clauses enact that all telegraphic messages are to be deemed post-letters, and the provisions of the Telegraph Act of 1868 and the present Act to be considered as "Post-office Laws."

---

8. TRADE AND SHIPPING.

CONTAGIOUS DISEASES, ANIMALS.

[32 and 33 Victoriæ, cap. 70.—August 9, 1869.]

An Act to consolidate, amend, and make perpetual the Acts for preventing the Introduction or Spreading of Contagious or Infectious Diseases among Cattle and other Animals in Great Britain.

The Act consists of 126 clauses, with nine schedules annexed, and is divided into ten parts, the last relating to Scotland. It vests very extensive powers in the Privy Council for preventing the spread of contagious diseases among animals, by regulating the movement of cattle, sheep, goats, and swine, and, if deemed necessary, prohibiting it altogether. Local authorities are also empowered to take means for preventing the spread of the disease, by the erection of sheds, wharves, and slaughter-houses in places where they may be required. All the provisions of the Act, which enter into minute details as to what shall be done to prevent the spread of contagious diseases, are of the most stringent nature, and penalties are decreed against all who may contravene or interfere with the due working of the Act.

COUNTY COURTS (ADMIRALTY JURISDICTION) ACT AMENDMENT.

[32 and 33 Victoriæ, cap. 51.—August 2, 1869.]

An Act to amend "The County Courts (Admiralty Jurisdiction) Act, 1868," and to give Jurisdiction in certain Maritime Causes.

The chief provision of the Act is that under it the jurisdiction of the county courts is extended over ships and goods to 300*l.*, and in respect of claims of larger amounts by consent. The judge may be assisted by mercantile assessors. The Court of Passage at Liverpool is empowered to make general rules and orders.

NITRO-GLYCERINE.

[32 and 33 Victoriæ, cap. 113.—August 11, 1869.]

An Act to prohibit, for a limited period, the Importation, and to restrict and regulate the Carriage, of Nitro-Glycerine.

The preamble of the Act states that, "whereas the carriage and conveyance of nitro-glycerine has been found to be attended with great risk and danger to the lives and property of Her Majesty's subjects, it is desirable to restrict and regulate such carriage." No person, after the passing of the Act, is to bring into any port or harbour of the United Kingdom, or ship or unship on, from, or near the coasts of any part of the United Kingdom, any nitro-glycerine. By acting in contravention to the provisions, the party is to be guilty of a misdemeanour, and liable to be imprisoned, with or without hard labour, for one year, and all nitro-glycerine brought into any port is to be forfeited. New regulations

are to be made as to the manufacture, sale, and carriage of nitro-glycerine, and notice of nitro-glycerine is to be given, and search permitted for the article.

SEEDS ADULTERATION.

[32 and 33 Victoriæ, cap. 112.—August 11, 1869.]

An Act to prevent the Adulteration of Seeds.

The preamble of the Act declares that "the practice of adulterating seeds, in fraud of Her Majesty's subjects and to the great detriment of agriculture," requires to be repressed by more effectual laws than those in force. It is enacted that to "kill seeds" means to destroy by artificial means their vitality or germinating power; and to "dye seeds" is to give to seeds by colouring the appearance of seeds of another kind. For the first offence the penalty is 5*l.*, and 50*l.* afterwards, with publication of the offender's name at his expense in newspapers. An appeal is given from a summary conviction, and a court may order a prosecutor to pay the costs of an unreasonable prosecution. The Act is not to take effect till the 1st of May, 1870.

WAREHOUSING OF WINES AND SPIRITS.

[32 and 33 Victoriæ, cap. 114.—August 11, 1869.]

An Act to amend the Law relating to the Warehousing of Wines and Spirits in Customs and Excise Warehouses, and for other Purposes relating to Customs and Inland Revenue.

The Act repeals several former statutes on the subject, and provides that foreign spirits and wines, of which an account has been taken and a bond given, may, without payment of duty, be removed to any excise warehouse or customs warehouse, or for exportation or for use as ship-stores, and may, upon the payment of the proper duties of customs, be delivered for home consumption. A scale of charges is given, in addition to the duties of customs or excise payable upon delivery from warehouse for home consumption, for every hundredweight of cotton goods. Among the goods liable to duties of customs, in addition to the other rates, is 2*s.* 6*d.* per pound on tobacco.

---

9. MISCELLANEOUS ACTS.

BEER-HOUSES.

[32 and 33 Victoriæ, cap. 27.—July 12, 1869.]

An Act to amend the Law for licensing Beer Houses, and to make certain Alterations with respect to the Sale by Retail of Beer, Cider, and Wine.

The Act, containing twenty-two clauses, provides a new system for granting licenses to houses and shops in which beer, cider, and wine are sold by retail. It is enacted, first, from the date of the 15th of July, 1869, "no license or renewal of a license, for the sale by retail of beer, cider, or wine, or any of such articles, under the provisions of any of the said recited Acts, shall be granted except upon the production and in pursuance of the authority of a certificate granted under this Act. Any license granted or renewed in contravention of this enactment shall be void." Clause 5 enacts that "certificates under this Act shall be granted by the justices assembled at the general annual licensing meeting held in pursuance of an Act of the session of the ninth year of the reign of King George the Fourth, chapter 61, intituled 'An Act to

regulate the Granting of Licenses to Keepers of Inns, Alehouses, and Victualling Houses in England,' or at some adjournment of such meeting held in pursuance of the said last-mentioned Act: provided that certificates for licenses under the said Acts of the twenty-third year of the reign of her present Majesty, of the twenty-fourth and twenty-fifth years of the reign of her present Majesty, and of the twenty-sixth and twenty-seventh years of her present Majesty, may be granted by justices at the special sessions for transferring licenses." Clause 6 provided that "a certificate under this Act shall specify the name and address of the person thereby authorised to receive a license, the description of license or licenses authorised to be granted to him, and whether such license or licenses is or are to be granted for the sale of beer, cider, or wine to be consumed on or off the premises, and the situation of the house or shop in respect of which such grant is authorised. It shall be in force for one year from the date of its being granted." The next clause orders that "every person intending to apply to the justices for a certificate under this Act shall, twenty-one days at least before he applies, give notice in writing of his intention to one of the overseers of the parish, township, or place in which the house or shop in respect of which his application is to be made is situate, and to some constable or peace officer acting within such parish, township, or place, and shall in such notice set forth his name and address, and a description of the license or licenses for which he intends to apply, and of the situation of the house or shop in respect of which the application is to be made; and in the case of a house or shop not theretofore licensed for the sale by retail of beer, cider, or wine, such person shall also, within the space of twenty-eight days before such application is made, cause a like notice to be affixed and maintained between the hours of ten in the morning and five in the afternoon of two consecutive Sundays on the door of such house or shop, and on the principal door or on one of the doors of the church or chapel of the parish or place in which such house or shop is situate, or, if there be no such church or chapel, on some other public and conspicuous place within such parish or place." By clause 12 it is enacted that "constables and officers of police may at all times enter into and examine—(1) Any house or shop in respect of which any person is licensed under any of the said recited Acts to sell by retail beer, cider, or wine not to be consumed on the premises; (2) Any house or shop in which any person is authorised, by virtue of an additional license under the said recited Act of the twenty-sixth and twenty-seventh years of the reign of her present Majesty, to sell beer by retail; and (3) Any house or shop licensed for the sale of table-beer under the Act of the Session of the twenty-fourth and twenty-fifth years of the reign of her present Majesty, chapter 21—in the same manner as if such house or shop were licensed for the sale by retail of beer, cider, or wine to be consumed on the premises." The Act is to be in force provisionally for two years from the date of passing, and "until the end of the then next session of Parliament." It is not to apply to Scotland or Ireland.

NEWSPAPERS, PRINTERS, AND READING-ROOMS.

[32 and 33 Victoriæ, cap. 24.—July 12, 1869.]

An Act to repeal certain Enactments relating to Newspapers, Pamphlets, and other Publications, and to Printers, Typefounders, and Reading Rooms.

The Act consists of only two clauses, with two schedules annexed. It repeals, entirely or in part, a great number of statutes, from the 36th

of George III. to the 16th and 17th Victoria, relating to printers and the press. Among the repealed Acts is the 39th of George III., requiring places for lectures or debates, or for reading books, newspapers, &c., to which places persons are admitted on payment, to be licensed at the sessions; and containing clauses relating to the registry with the clerk of the peace of persons having or making printing-presses or types. Also the statute repeals an Act of 60th George III. and 1st George IV., requiring the printer of a newspaper to enter into a recognisance, with sureties, to pay any fine imposed on conviction for a blasphemous or seditious libel, and to send a copy of every paper to the Stamp Office. Also the Act of 6th and 7th William IV., regulating the printing of the date, title, &c. of newspapers, and the name of the printer, and requiring a declaration to be made before a newspaper is printed. But the Act leaves in force that part of the 39th of George III., cap. 79, which requires the printer of any paper published for hire or gain to keep for six months a copy of it, and write thereon the name and abode of his employer, and produce such copy to any magistrate requiring to see it. There is also still to be a penalty, not exceeding 5*l.*, on a person printing any paper or book to be published or dispersed without printing his name and abode or place of business upon the front of it, or on the first or last leaf. Prosecutions for penalties must be in the name of the Attorney-General.

SAVINGS BANKS AND POST-OFFICE SAVINGS BANKS.

[32 and 33 Victoriæ, cap. 59.—August 9, 1869.]

An Act to amend the Laws relating to the Investments for Savings Banks and Post Office Savings Banks.

The Act contains eight clauses, with two schedules annexed. It declares that while the payment of annuities under the Acts 26 & 27 Vict. cap. 25, 29 & 30 Vict. cap. 5, 30 & 31 Vict. cap. 26, has been half-yearly, and the object of the Act is to cancel the same, and that terminable annuities, payable at various periods during the year, shall be substituted for them: new annuities may be created terminable not later than the 5th of July, 1885, chargeable on the Consolidated Fund, payable at times to be fixed by the warrant of the Treasury Commissioners. The Act provides for the investment of surplus annuities by the Commissioners for the Reduction of the National Debt as are not for the time being required to pay the demands of the trustees of savings banks. Several statutes recited in the schedules to the Act are repealed.

SEA-BIRDS' PRESERVATION.

[32 and 33 Victoriæ, cap. 17.—June 24, 1869.]

An Act for the Preservation of Sea Birds.

The Act, which is short, states that the sea-birds of the United Kingdom have of late years greatly decreased in number, and that it is expedient to provide for their protection during the breeding season. It is made an offence to kill, wound, or to take or have possession of any sea-bird recently killed or taken, between the 1st of April and the 1st of August in each year; one moiety of the penalty of 20*s.* to be paid to the informer.

ABSTRACTS OF PARLIAMENTARY AND OTHER OFFICIAL DOCUMENTS.

1. Finance and Taxation.

National Revenue and Expenditure.—The subjoined Tables show the Gross Public Revenue and Expenditure of the United Kingdom in the Financial Year ending the 31st of March, 1869 :—

Revenue, 1868-69 :—	£	s.	d.
Customs	22,424,000	0	0
Excise	20,462,000	0	0
Stamps	9,218,000	0	0
Taxes (Land and Assessed)	3,494,000	0	0
Property Tax	8,618,000	0	0
Post Office	4,660,000	0	0
Crown Lands (Net)	360,000	0	0
Military and Naval extra Receipts	899,260	5	4
Amount received from the Revenues of India on account of British Troops	837,000	0	0
Allowance out of Profits of Bank of England	138,578	0	0
Miscellaneous Receipts	1,481,153	7	4
Total Gross Income	72,591,991	12	8

National Debt Expenditure, 1868-69. :—	£	s.	d.
Interest and Management of the Permanent Debt	22,454,094	14	4
Terminable Annuities	3,951,155	11	8
Interest of Exchequer Bonds	91,250	0	0
Interest of Exchequer Bills	112,027	10	7
Interest of Bank Advances for Deficiency	5,918	9	8
Interest of Bank Advances in aid of Ways and Means	3,879	9	0
Consolidated Fund Charges :—			
Civil List	406,629	13	0
Annuities and Pensions	282,013	13	11
Salaries and Allowances	140,461	6	10
Diplomatic Salaries and Pensions	165,790	5	8
Courts of Justice	714,452	4	10
Miscellaneous Charges	177,939	0	6
Supply Services :—			
Army	15,000,000	0	0
Navy	11,366,545	5	6
Abyssinian Expedition	5,000,000	0	0
Miscellaneous Civil Services	8,983,018	11	10
Salaries, Superannuations, &c. of Customs & Inl. Rev.	2,576,164	6	5
Ditto ditto Post Office	2,445,137	18	6
Post Office Packet Service	1,096,338	0	6
Total Ordinary Expenditure	74,972,816	2	9
Expenses of Fortifications	525,000	0	0
Total Expenditure	75,497,816	2	9

CUSTOMS AND EXCISE.—The Produce of the two great sources of PUBLIC REVENUE, CUSTOMS and EXCISE, which together contribute considerably more than One Half to the NATIONAL INCOME of the UNITED KINGDOM, was as follows in the Financial Year ending March 31, 1869:—

LIST OF ARTICLES WHICH PAID CUSTOMS DUTIES.	GROSS RECEIPTS OF CUSTOMS, 1868–69.		
	Great Britain.	Ireland.	United Kingdom.
	£ s. d.	£ s. d.	£ s. d.
Beer, Spruce	1,666 19 2	..	1,666 19 2
Beer of other Sorts	2,536 16 4	..	2,536 16 4
Chicory	102,652 6 8	..	102,652 6 8
Cocoa, Cocoa Husks, and Chocolate	26,552 11 4	827 17 9	27,380 9 1
Coffee	350,857 16 7	6,179 4 9	357,037 1 4
Corn, Meal, and Flour	763,973 6 11	141,779 3 4	905,752 10 3
Currants	268,186 2 4	538 3 2	268,724 5 6
Figs	24,648 4 5	170 17 3	24,819 1 8
Ginger, Preserved	1,339 16 10	..	1,339 16 10
Plate, Gold and Silver	3,645 8 8	37 17 6	3,683 6 2
Plums, Dried or Preserved, French Plums and Prunelloes	2,875 0 0	122 10 4	2,997 10 4
Potato Flour	3,022 15 5	2 16 7	3,025 12 0
Prunes	5,137 19 1	33 7 7	5,171 6 8
Raisins	127,735 9 8	1,747 4 0	129,482 13 8
Sago	4,733 11 5	0 6 3	4,733 17 8
Spirits, Colonial and Foreign:			
Rum	1,914,352 18 11	54,847 13 2	1,969,200 12 1
Brandy	1,631,357 14 11	112,164 1 2	1,743,521 16 1
Geneva	56,055 7 0	14,197 3 3	70,252 10 3
Of other Sorts	537,610 0 11	12,930 8 6	550,540 9 5
Succades and Confectionery, including all Fruits and Vegetables preserved in Sugar	3,705 17 5	4 13 9	3,710 11 2
Sugar, Unrefined	5,085,655 7 7	64,776 19 11	5,150,432 7 6
Sugar, Refined, and Sugar Candy	427,361 6 10	36,812 13 3	464,174 0 1
Sugar, Molasses	116,475 4 0	49 8 0	116,524 12 0
Tea	2,269,981 18 7	327,998 6 6	2,597,980 5 1
Tobacco and Snuff	5,344,000 11 8	1,198,460 2 9	6,542,460 14 5
Wine	1,373,317 14 11	150,211 12 10	1,523,529 7 9
All other Articles	12,057 0 7	140 12 3	12,197 12 10
Total	20,461,495 8 2	2,124,033 3 10	22,585,528 12 0

LIST OF ARTICLES WHICH PAID EXCISE DUTIES.	GROSS RECEIPTS OF EXCISE, 1868–69.		
	Great Britain.	Ireland.	United Kingdom.
	£ s. d.	£ s. d.	£ s. d.
Chicory	15,909 15 0¾	..	15,909 15 0¾
Hackney Carriages	99,313 17 0	..	99,313 17 0
Licenses	2,473,406 14 1½	187,581 17 4	2,660,988 11 5½
Malt	6,367,187 16 7¾	377,136 11 11¾	6,744,324 8 7½
Racehorses	9,748 4 0	..	9,748 4 0
Railways	499,408 18 6	..	499,408 18 6
Stage Carriages	36,486 9 10½	..	36,486 9 10½
Spirits	8,100,835 9 4	2,880,770 9 5	10,981,605 18 9
Sugar	66,497 7 10½	3,289 13 10	69,787 1 8½
Total	17,668,794 12 4½	3,448,778 12 6¾	21,117,573 4 11½

The Returns of Customs and Excise Duties here given are somewhat in excess of the sums set down in the first Table under the head of National Revenue, which arises from the non-deduction of Overcharges and Allowances of various kinds.

COLLECTION OF REVENUE.—The total expenditure incurred in collecting the Revenue in the financial year ending March 31, 1869, was 6,017,829*l.* 10*s.* 9*d.*, divided as follows among the various Revenue Departments:—

	£.	s.	d.
Customs	992,375	8	2
Inland Revenue . .	1,591,950	18	7
Post Office . . .	2,376,920	1	9
Packet Service . .	1,032,190	16	0
	5,993,437	4	6
Woods, Forests, and Land Revenues .	24,389	6	3
	£6,017,826	10	9

THE NATIONAL DEBT AND ITS HOLDERS.—On the 31st of March, 1869, the capital of the unredeemed funded debt of the United Kingdom amounted to 740,418,032*l.*, and of the unfunded debt to 8,896,100*l.*, while the estimated capital of terminable annuities was 47,546,935*l.* On the first dividend day in 1869, there were 248,002 persons entitled to dividends on stock in the public funds. There were 83,224 persons entitled to dividends not exceeding 5*l.*; 38,394 to dividends above 5*l.*, but not exceeding 10*l.*; 84,188 to dividends above 10*l.*, but not exceeding 50*l.* Of the remaining number, 22,282 received dividends between 50*l.* and 100*l.*, 12,484 between 100*l.* and 200*l.*, 3,416 between 200*l.* and 300*l.*, 2,247 between 300*l.* and 500*l.*, 1,157 between 500*l.* and 1,000*l.*, 400 between 1,000*l.* and 2,000*l.*, and 210 above 2,000*l.* All these were dividends for the half-year. Twelve years previously, in 1856, the fundholders were as many as 268,359. The large holders are more in number now than they were then; in 1856, 1,665 persons received more than 500*l.* as their half-year's dividend; in 1868, 1,767.

INCOME TAX.—The property and income charged with income-tax in the year ending the 5th of April, 1867, amounted to 374,342,902*l.*—viz., 316,676,079*l.* in England, 32,399,138*l.* in Scotland, and 25,267,685*l.* in Ireland. This was an increase of 2·72 per cent. over the preceding year—2·42 per cent. in England, 5·13 per cent. in Scotland, and 3·39 per cent. in Ireland. The assessments on houses in England showed an increase of 1,655,000*l.*, in Scotland 231,000*l.*, in Ireland 77,000*l.*; in Lancashire 318,000*l.*, Middlesex 277,000*l.*, Surrey 204,000*l.*, Yorkshire 196,000*l.*, Kent 132,000*l.* Mines show an increase of 411,000*l.* in England, and 138,000*l.* in Scotland; ironworks an increase of 449,000*l.* in England, and 109,000*l.* in Scotland; gasworks an increase of 260,000*l.* in England. The amount of profits of trades and professions charged with income-tax on the average of the three preceding years under Schedule D in England for the year 1866 was in excess of the amount charged for the year 1865 to the extent of 4,019,000*l.* The assessment advanced in Liverpool from 7,882,000*l.* to 8,633,000*l.*; in Manchester, from 5,132,000*l.* to 5,324,000*l.*; in Birmingham, from 2,092,000*l.* to 2,346,000*l.*; in Leeds, from 1,812,000*l.* to 2,053,000*l.*; in Bradford, from 1,604,000*l.* to 1,695,000*l.*; in Bristol, from 1,379,000*l.* to 1,516,000*l.*; in Sheffield, from 1,344,000*l.* to 1,427,000*l.* In Westminster district the increase was from 5,170,000*l.* to 5,285,000*l.*; in Bloomsbury, from 2,133,000*l.* to 2,236,000*l.*; in Finsbury, from 1,481,000*l.* to 1,752,000*l.*; in Marylebone district from 1,400,000*l.* to 1,447,000*l.*; in Holborn district from 1,082,000*l.* to 1,202,000*l.*; in Southwark, from 1,034,000*l.* to 1,164,000*l.*; in Kensington district from 931,000*l.* to 1,034,000*l.*; in Greenwich, from 931,000*l.* to 1,002,000*l.* The City of London is the only district in which the assessments for 1866, under Schedule D, show any considerable decrease, the decrease being from 24,653,000*l.* in 1865 to 23,601,000*l.* in 1866.

LOCAL TAXATION IN ENGLAND.—A Parliamentary return, moved for by Mr. Hunt, the late Chancellor of the Exchequer, showing in detail for each parish in England the local taxation levied in the year ending at Ladyday, 1868, was issued in the session of 1869, in the shape of a Blue-book of 642 folio pages. It states that the gross estimated rental of the property assessed in 1868 was 118,334,081*l.*, and the rateable value 100,612,734*l.*, both figures showing a large advance on the previous return, but the second still keeping its distance from the first, and the first doubtless below the assessment to income-tax; but the exact amount of the latter cannot be stated, as the assessments on railways and various works for extracting a marketable article from underground are now merged in Schedule D. The total amount of local taxation borne by the country in the year 1867-68 was 16,660,459*l.* There was levied under the name of poor-rate 11,061,502*l.*, besides 307,232*l.* separately levied in some places for county, hundred, borough, or police-rate; also 916,779*l.* separately levied for highway rate; church-rates amounted to 217,083*l.*; lighting and watching rate, 76,978*l.*; improvement rates under Commissioners, 445,431*l.*; general district rates under the Public Health Acts, 1,736,247*l.*; rates under Courts of Commissioners of Sewers, including drainage and embankment rates, 695,810*l.*; rates of other kinds, 1,203,397*l.*, including 981,140*l.* for general and lighting rates levied in the metropolitan district. The levy for all these rates averaged in England (with Wales) 3*s.* 3¾*d.* in the pound; but it varied from 4*s.* 6*d.* in Surrey to 1*s.* 6½*d.* in Westmoreland. In six counties the levy exceeded 4*s.* in the pound on the rateable value—viz., Cardigan, Anglesey, Surrey, Sussex, Carnarvon, and Huntingdon. In 11 other counties the levy was over 3*s.* 4*d.*, in Middlesex within a farthing of 4*s.* In Gloucester it was exactly the average—3*s.* 3¾*d.* In 15 other counties, though below that amount, the levy exceeded 3*s.* In Durham it was 3*s.*; in the other 20 counties it was below 3*s.*; in Derby only 2*s.* 4*d.*; Cumberland, 2*s.* 3¾*d.*; Northumberland, 2*s.* 2½*d.*; Salop, 1*s.* 11¾*d.*; Westmoreland, 1*s.* 6½*d.* Lancashire is slightly over the average, the levy being 3*s.* 4½*d.*; in the West Riding it is

3*s.* 9½*d.*; East Riding, only 2*s.* 6½*d.*; and North Riding, only 2*s.* 4½*d.* The ratio is not calculated parish by parish, but the rateable value of each parish is given, and the amount levied for poor-rate, or, at least, under the name of poor-rate. Nine thousand five hundred and forty-five paid collectors were employed to bring in this levy upon the country, and their remuneration amounted to 294,733*l.* The number and pay of the collectors is shown union by union, and parish by parish.

County Rate.—A Parliamentary return was issued in the session of 1869, showing the sums expended in the several counties of England levied on the county rate, distinguishing how much was spent under statute over which the local authority have no control, and how much over which they have an independent control. The relative proportions of these two classes of expenditure differ very greatly in different counties. Thus, in Wiltshire the total was 28,857*l.*, and of this amount no less than 26,095*l.* was expenditure prescribed by statute, and only 2,762*l.* was for bridges, salaries, printing, &c., over which the justices have an independent control. In Nottingham also only 3,421*l.* of the total, 26,334*l.*, was for expenses over which the justices have an independent control; in Norfolk, only 5,185*l.* of the 35,997*l.*; in Kent, only 8,738*l.* of the 60,753*l.*; in Stafford, only 11,361*l.* of the 202,326*l.*; in the West Riding, only 14,993*l.* of the 173,483*l.* On the other hand, in Dorset the expenditure under local control was as much as 7,963*l.* in a total of 23,873*l.*; in Hereford, 3,894*l.* of 14,147*l.*; in Lancashire, 28,321*l.* of 94,575*l.*; in Leicester, 5,613*l.* of 19,657*l.*; in Surrey, 21,879*l.* of 88,440*l.*; and in Glamorgan, 32,032*l.* of 34,652*l.*

County Expenditure.—The accounts of the county treasurers of England and Wales for the year ending at Michaelmas, 1868, show that the valuation on which the assessment for the county rate is made amounted in that year to 86,385,448*l.* Generally the valuation gradually increases, but in 1867 an enormous increase, amounting to more than ten millions, occurred, and that great advance has not been quite maintained. Several counties, indeed, show an increased valuation in 1868, but they are more than counterpoised by two reductions. The assessment for West Sussex, which in 1866 was 435,455*l.*, was advanced in 1867 to 993,525*l.*, but in 1868 was reduced to 558,070*l.*; and that for Warwickshire, raised from 1,412,104*l.* in 1866 to 2,664,688*l.* in 1867, was reduced in 1868 to 1,410,266*l.* The receipts from county and police rates in all the counties of England and Wales amounted to 1,290,658*l.* in 1865, 1,358,762*l.* in 1866, 1,446,937*l.* in 1867, and 1,500,566*l.* in 1868. Including Treasury allowances and all other receipts, the total receipts of county treasurers amounted to 1,956,350*l.* in 1865, 2,426,682*l.* in 1866 (including the exceptional item of cattle diseases rate, 368,000*l.*), 2,287,347*l.* in 1867, and 2,292,949*l.* in 1868. The total expenditure has been 2,009,691*l.* in 1865, 2,415,837*l.* in 1866 (including 350,262*l.* under the Cattle Diseases Act), 2,778,640*l.* in 1867, and 2,326,846*l.* in 1868.

Local Taxation in Ireland.—The grand jury presentments in Ireland in 1868 amounted to 1,146,549*l.*, of which, however, 24,464*l.* consisted of re-presentments. The presentments for roads and bridges amounted to 617,634*l.*; for gaols, 89,780*l.*; building or repairing court-houses, 6,151*l.*; police and payments to witnesses, 20,324*l.*; salaries of various county officers, 108,261*l.*; public charities, 107,974*l.*; repayment of advances to Government, 102,240*l.*; miscellaneous, 94,184*l.*

Debts of Boroughs.—The debts of some of the municipal boroughs of England are of considerable amount. The annual accounts made up to the 31st of August, 1868, show the debt of Manchester to be 883,204*l.*; of Halifax, 737,869*l.*; of Birmingham, 627,373*l.*; of Oldham, 534,849*l.*; of Newcastle-upon-Tyne, 274,506*l.*; of Preston, 198,975*l.* The total of secured debts is 4,900,743*l.*, and thirteen boroughs sent in no account. The amount borrowed on security in the year was 581,666*l.* The expenditure on public works in the year ending the 31st of August, 1868, was 1,163,086*l.*; at Manchester, 414,812*l.*; Liverpool, 127,802*l.*; Newcastle, 95,960*l.*; Halifax, 93,293*l.*; Oldham, 73,660*l.*; Birmingham, 70,807*l.* The debt (principal) paid off in the year was 348,332*l.*

---

2. Currency.

Coinage of 1868.—The quantity of gold coined in the United Kingdom has been very small in the two years 1867 and 1868. In 1867 no sovereigns were coined, and in 1868 no half-sovereigns; but 1,653,384 sovereigns were coined in 1868. The average of the ten years, 1859-68, has been 4,129,364 sovereigns in a year, and 1,248,256 half-sovereigns. No crowns or half-crowns have been coined for many years. In 1868, 896,940 florins were coined, 3,370,360 shillings, 1,069,200 sixpences, 4,158 fourpences (but no groats have been coined for twelve years), 1,461,768 threepences, 4,752 silver twopences, and 7,920 silver pence. The copper coinage of 1868 comprised 1,181,720 pence, 3,046,400 halfpence, and 4,851,208 farthings. No half-farthings have been coined for twelve years. The total value of the gold coinage of 1868 was 1,653,384*l.*, of the silver 301,356*l.*, of the copper 16,328*l.*; the real value of the silver metal was 312,252*l.*, and of the copper, 10,010*l.* Worn silver coin of the nominal value of 125,000*l.* was purchased in 1868 for recoinage, the loss by recoinage amounting to 18,058*l.*

MOVEMENT OF GOLD.—The value of the gold imported into the United Kingdom in the first six months of 1869 was computed at 5,363,485*l.*, as compared with 9,929,479*l.* in the corresponding period of 1868, and 2,356,721*l.* in the corresponding period of 1867. The receipts of gold from Australia in the first half of 1869 were 3,367,050*l.* as compared with 3,203,940*l.* in the corresponding period of 1868, and 2,286,749*l.* in the corresponding period of 1867. The receipts of gold from the United States were only 276,744*l.*, as compared with 4,604,575*l.* in the corresponding period of 1868, and 2,356,721*l.* in the corresponding period of 1867. The exports of gold from the United Kingdom amounted in the first half of 1869 to 3,923,469*l.*, as compared with 6,168,903*l.* in the corresponding period of 1868, and 3,220,083*l.* in the corresponding period of 1867. The exports of gold to France amounted to 1,715,695*l.* in the first half of 1869, against 4,365,653*l.* in 1868, and 2,220,126*l.* in 1867 (corresponding periods).

GOLD CURRENCY.—A report has been addressed to the Chancellor of the Exchequer by the (since deceased) Master of the Mint and the late Master of the Calcutta Mint, on the mintage necessary to cover the expenses of establishing and maintaining the gold currency. The gold coinage in circulation in the United Kingdom is generally estimated at about 80 millions sterling, 68-80ths being sovereigns, and 12-80ths half-sovereigns. An estimated annual coinage of about 10 millions would be made up of four millions of first coinage and six millions of renewal. The cost at which a sovereign or half-sovereign is produced may be safely taken at about a halfpenny. By wear sovereigns fall below the legal weight after a circulation of 18 years, and half-sovereigns in 10 years. Mr. Jevons calculates the annual loss by wear on 100 sovereigns at 8·371 pence; on our present mixed circulation of sovereigns and half-sovereigns, the annual loss is calculated at 35,000*l.* Some coins drop out of circulation annually by shipwrecks, fires, melting, losses, &c.; and, on the other hand, it is estimated that there are about thirty million sovereigns in circulation in foreign countries, part of which may be returned to the United Kingdom for renewal when they become light. The result of the whole calculation is that for our circulation of 68 million sovereigns and 12 million half-sovereigns, an endowment of 1*l.* 13*s.* 6*d.* for every 100*l.* would suffice for the permanent maintenance of the coin, the first construction, and all future restoration. These results are based upon the mere bullion by itself, and are quite independent of all other considerations.

BANK OF ENGLAND NOTES.—At the close of the first half of the year 1869, there were in circulation 1,682,600 5*l.* Bank of England notes, 444,400 10*l.* notes, notes from 20*l.* to 100*l.* of the aggregate value of 6,896,000*l.*, 200*l.* to 500*l.* notes of the value of 1,807,000*l.*, and 1833 1000*l.* notes. Thus the total value of the bank-notes held by the public was 23,393,000*l.* The bullion held amounted to 18,624,000*l.*, the 15,000,000*l.* securities making a total of 33,624,000*l.* held against the notes issued or in reserve.

LONDON BANKERS' CLEARING HOUSE.—The following table shows the average daily clearances at the London Bankers' Clearing House, during six four-monthly periods, ending April, 1869:—

Four Months.	Daily Average.
	£
Ending Aug., 1868 . . .	9,666,000
,, Dec., '68 . . .	9,607,000
,, April, '69 . . .	10,562,000
Year ending April, 1869 .	9,942,000

Four Months.	Daily Average.
	£
Ending Aug., 1867 . . .	9,374,000
,, Dec., '67 . . .	9,108,000
,, April, '68 . . .	9,667,000
Year ending April, 1868 .	9,383,000

BILLS OF EXCHANGE.—An Inland Revenue return shows that in the financial year ending with March, 1868, 6,106,435 stamps were sold for inland bills, and 2,670,546 for foreign bills. The stamp-duty received on the inland bills amounted to 389,450*l.*; on the foreign bills to 314,610*l.* The average rate of stamp-duty is about 1*s.* 2*d.* per cent.

3. TRADE AND INDUSTRY.

IMPORTS INTO THE UNITED KINGDOM.—The following table gives, after the returns of the Board of Trade, the quantities of the chief articles imported into the United Kingdom in the year ended the 31st December, 1868:—

Animals:—Oxen, Bulls, Cows, and Calves	number	136,688
Sheep and Lambs . .	,,	341,155
Bacon and Hams . . .	cwts.	638,127
Beef	,,	245,120
Bones, except Whalefins	tons.	75,850
Brimstone	cwts.	1,261,504
Bristles	lbs.	2,200,203
Butter	cwts.	1,097,539
Caoutchouc	,,	145,584
Cheese	,,	873,377
Clocks and Watches .	value £	476,214
Cochineal, Granilla, and Dust	cwts.	35,575
Cocoa	lbs.	10,140,716

Coffee:—		
From British Possessions	lbs.	136,221,150
From Foreign Countries	,,	37,681,327
Total of Coffee	,,	173,902,477
Copper Ore and Regulus	tons.	114,036
Unwrought, and Part Wrought	cwts.	703,340
Corn:—		
Wheat	cwts.	32,639,768
Barley	,,	7,476,224
Oats	,,	8,112,563
Maize	,,	11,472,226
Flour of Wheat	,,	3,093,022
Cotton, Raw	,,	11,857,893
Dyeing (or Tanning) Stuffs:—		
Cutch and Gambier	tons	23,780
Indigo	cwts.	75,874
Madder	,,	128,242
Madder Root	,,	177,336
Shumac	tons	13,251
Valonia	,,	29,623
Eggs	numb.	383,969,040
Fish of foreign taking (exclusive of Eels)	cwts.	417,349
Flax, Dressed and Undressed	,,	1,816,669
Fruits:—		
Currants	cwts.	911,711
Raisins	,,	512,462
Oranges and Lemons	bush.	1,806,372
Glass of all kinds (except Bottles of Green or Common Glass)	cwts.	559,187
Guano	tons	182,343
Gutta Percha	cwts.	16,279
Hair:—		
Goats' Hair or Wool	lbs.	7,066,773
Manufactures of Hair and of Goats' Wool	val. £	97,101
Hemp and other like substances (except Jute), Undressed	cwts.	1,042,320
Jute, Undressed	cwts.	2,182,521
Hides, Tanned and Untanned	,,	1,033,753
Hops	cwts.	231,720
Iron in Bars, Unwrought	tons	64,689
Lard	cwts.	237,260
Lead, Pig and Sheet	tons	49,461
Leather Gloves	pairs	10,714,188
Oil:—Fish	tuns	13,990
Palm	cwts.	960,059
Cocoa	,,	194,752
Olive	tuns	17,585
Seed	,,	23,291
Turpentine	cwts.	108,897
Oilseed Cake	tons	161,593
Pork	cwts.	151,362
Potatoes	,,	2,041,474
Rags and other Materials for making Paper:—		
Rags	tons	17,902
Other Materials	,,	96,453
Rice	cwts.	4,735,997
In the Husk	qrs.	45,404
Rosin	cwts.	695,454
Saltpetre	,,	185,922
Cubic Nitre	,,	1,029,055
Seeds:—		
Clover	,,	264,878
Flax and Linseed	qrs.	1,635,528
Rape	qrs.	356,884
Silk:—		
Raw	lbs.	7,036,177
Thrown	,,	326,574
Silk Manufactures:—		
Of Europe — Broad Stuffs	,,	2,461,530
Ribbons	,,	1,325,388
Of India—Bandannas, Corahs, Choppas, Tussore Cloths, Romals, and Taffaties	pieces	80,534
Silver Ore	tons	3,172
Skins:—		
Sheep, Undressed	numb.	3,913,392
Tanned, Tawed, or Dressed	,,	2,154,387
Lamb, Undressed	,,	660,423
Tanned, Tawed, or Dressed	,,	112,666
Seal, in the Hair, Undressed	,,	780,475
Goat, Undressed	,,	866,117
Tanned, Tawed, or Dressed	,,	2,298,983
Spices:—		
Cassia Lignea	lbs.	568,212
Cinnamon	,,	1,275,626
Cloves	,,	1,130,758
Nutmegs	,,	682,139
Pepper	,,	16,990,144
Spirits:—		
Rum	gals.	7,035,034
Brandy	,,	4,062,884
Other Foreign and Colonial Spirits	,,	1,799,653
Sugar, Refined, and Sugar Candy	cwts.	729,865
Raw:—		
Of or from British Possessions	,,	5,282,699
Of or from Foreign Countries	,,	6,513,462
Total of Sugar, Raw	,,	11,796,161
Molasses	,,	846,464
Tallow	,,	1,237,348
Tea	lbs.	154,845,863
Teeth, Elephants', Sea Cow, Sea Horse, or Sea Morse	cwts.	9,909
Timber and Wood:—		
Not Sawn or Split:		
Of Foreign Countries	loads	824,492
Of British Possessions	,,	501,933
Total of Wood, not Sawn or Split	,,	1,326,425
Sawn or Split:		
Of Foreign Countries	,,	1,648,251
Of British Possessions	,,	769,164
Total of Wood, Sawn or Split	,,	2,417,415
Staves	,,	61,262
Mahogany	tons.	41,925
Tin, in Blocks, Ingots, Bars, or Slabs	cwts.	112,500

Tobacco, Manufactured, Cigars and Snuff	lbs.	3,051,398
Unmanufactured	,,	49,016,582
Wine	gals.	16,953,454
Wool,—Sheep, Lamb, and Alpaca	lbs.	252,744,155
Woollen Rags, torn up, to be used as Wool	tons.	9,531
Woollen Manufactures not made up	val. £	2,261,192
Yeast, Dried	cwts.	116,133

EXPORTS OF HOME PRODUCE FROM THE UNITED KINGDOM.—The following table gives, after the returns of the Board of Trade, the quantities of the chief articles of British and Irish produce and manufactures exported from the United Kingdom in the year ended the 31st December, 1868:—

Alkali—Soda	cwts.	3,512,502
Arms and Ammunition:—		
Firearms (Small)	numb.	497,544
Gunpowder	lbs.	17,026,009
Bacon and Hams	cwts.	31,439
Bags, Empty	dozs.	2,150,181
Beef and Pork	cwts.	13,581
Beer and Ale	brls.	496,324
Books, Printed	cwts.	62,122
Butter	,,	53,164
Candles, Stearine	lbs.	5,391,984
Carriages	numb.	1,707
Cement	cwts.	2,478,886
Cheese	,,	25,136
Coals, Cinders, and Culm	tons	10,837,513
Cordage and Twine	cwts.	115,089
Corn:—		
Wheat	,,	176,648
Wheat Flour	,,	25,636
Cotton Yarn	lbs.	174,537,970
Cotton Manufactures:—		
Piece Goods, White or Plain	yds.	2,030,308,647
Printed, Checked, or Dyed	,,	936,397,895
Total of Piece Goods	,,	2,966,706,542
Stockings	doz.prs.	1,109,300
Thread for Sewing	lbs.	6,658,244
Fish:—		
Herrings	brls.	426,693
Glass:—		
Flint	cwts.	99,654
Window	,,	73,379
Common Bottles	,,	704,450
Hats of all Sorts	dozs.	277,797
Horses	numb.	4,143
Leather, Tanned, Unwrought	cwts.	64,138
Wrought, Boots and Shoes	lbs.	5,275,274
Of other Sorts	,,	935,789
Linen Yarn	,,	32,857,117
Linen Manufactures:—		
White or Plain, Damask, &c.	yds.	198,714,264
Printed, Checked, or Dyed	,,	7,142,516
Sailcloth	,,	3,523,470
Total of Piece Goods	,,	209,380,550
Thread for Sewing	lbs.	2,682,474
Metals:—		
Iron, Pig and Puddled	tons	555,020
Bar, Angle, Bolt, and Rod	,,	302,076
Railroad, of all Sorts	,,	581,099
Wire	,,	21,137
Cast	,,	86,582
Hoops, Sheets, and Boiler Plates	,,	148,340
Wrought, of other Kinds	,,	124,510
Old, for remanufacture	,,	95,094
Steel, Unwrought	,,	31,388
Total of Iron and Steel	,,	1,945,246
Copper, Unwrought:—		
Ingots, Cakes, or Slabs	cwts.	163,480
Wrought or partly Wrought:		
Bars, Rods, Sheets, Nails, &c.	,,	285,425
Mixed or Yellow Metal	,,	266,365
Of other Sorts	,,	45,646
Brass, of all Sorts	,,	42,260
Lead, Pig, Sheet, Pipe, and Shot	tons	43,876
Ore, Red and White Lead, and Litharge	,,	9,456
Tin, Unwrought	cwts.	82,506
Plates	,,	1,763,674
Zinc, Wr. and Unwr.	,,	170,424
Oil, Seed	galls.	9,369,500
Paper (other than Hangings)	cwts.	183,761
Salt	tons	797,502
Silk:—		
Thrown	lbs.	771,788
Twist and Yarn	,,	266,933
Silk Manufactures:—		
Broad Piece Goods	,,	2,913,805
Handkerchiefs and Shawls	,,	73,199
Ribbons	,,	48,380
Soap	cwts.	197,392
Spirits, British	galls.	1,352,695
Sugar, Refined	cwts.	268,438
Wool, Sheep and Lambs'	lbs.	9,447,135
Woollen and Worsted Yarn	,,	43,657,842
Woollen and Worsted Manufactures:—		
Cloths, Coatings, &c., Unmixed and Mixed	yds.	24,630,978
Flannels, Blankets, Blanketing, and Baizes	,,	12,785,623
Worsted Stuffs, Unmixed and Mixed	,,	224,621,434
Carpets and Druggets	,,	7,385,769

EXPORT MARKETS OF THE UNITED KINGDOM.—The following table gives, after the returns of the Board of Trade, the declared real value of British and Irish produce and manufactures exported from the United Kingdom to foreign countries and British possessions in the year ended the 31st December, 1868:—

I.—Foreign Countries.	£
Russia . { Northern Ports	3,615,493
Russia . { Southern Ports	625,483
Sweden and Norway	1,392,371
Denmark	1,441,768
Danish West Indies	295,229
Prussia	3,070,515
Former Schleswig-Holstein	119,356
Former Hanover	163,622
Hanse Towns	19,320,647
Netherlands	10,392,253
Java and Sumatra	837,504
Belgium	3,149,769
France	10,633,721
Algeria	23,697
Possessions in Senegambia	700
Possessions in India	. . . .
Portugal	1,556,324
Azores and Madeira	166,946
Spain	2,206,470
Canary Islands	197,075
Fernando Po	17,338
Cuba	2,331,692
Porto Rico	185,364
Philippine Islands	955,554
Italy:—	
Sardinia	1,727,767
Tuscany	856,654
Two Sicilies	1,853,873
Venetia	259,983
Adriatic Ports	281,939
Papal Ports	22,309
Austria	1,084,575
Greece	975,081
Turkey	6,293,782
Roumania	634,670
Syria and Palestine	1,229,249
Egypt	6,068,569
Morocco	195,665
United States	21,410,184
Mexico	849,484
Central America	160,051
Haiti and San Domingo	220,886
New Granada	2,704,958
Venezuela	69,559
Ecuador	28,982
Brazil	5,323,937
Uruguay	930,973
Argentine Confederation	1,922,991
Chili	1,958,234
Peru	1,135,213
China	6,3·2,866
Japan	1,105,069
West Coast of Africa	883,271
Other Countries	483,416
Total of Foreign Countries.	129,684,081

II.—British Possessions.	
Channel Islands	556,458
Gibraltar	705,627
Malta	500,422
North American Colonies:—	
British Columbia	74 051
Hudson's Bay Settlements	38,648
Newfoundland	261,723
Canada	3,054,669
New Brunswick	491,503
Prince Edward Island	107,352
Nova Scotia	819,614
Total of North American Colonies	4,847,560
West India Islands and Guiana	2,504,789
British Honduras	133,573
Australasia:—	
Western Australia	107,736
South Australia	1,177,638
Victoria	5,614,137
New South Wales	2,872,000
Queensland	409,099
Tasmania	190,430
New Zealand	1,700,395
Total of Australasia	12,071,435
British India	21,211,343
Singapore and Straits Settlements	1,513,397
Ceylon	835,798
Hong Kong	2,186,100
Mauritius	383,618
Cape of Good Hope and Natal	1,591,233
Possessions on the River Gambia	63,114
Sierra Leone	220,529
Possessions on the Gold Coast	329,636
Other Possessions	124,931
Total of British Possessions	49,779,563
Total of Foreign Countries and British Possessions	179,463,644

Corn Imports in 1867 and 1868.—The value of wheat imported during the year 1868 was 22,069,353*l.*, against 24,985,096*l.* in 1867, and 12,983,090*l.* in 1866. The value of wheat imported in 1867 and 1868 respectively from different countries was as follows:—Russia, 9,747,004*l.* and 6,337,135*l.*; Denmark, 289,246*l.* and 413,778*l.*; Schleswig-Holstein and Lauenburg, 89,457*l.* and 32,353*l.*; Prussia, 4,359,806*l.* and 3,358,296*l.*; Mecklenburg, 490,370*l.* and 490,704*l.*; Hanse Towns, 508,374*l.* and 500,662*l.*; France, 412,504*l.* and 35,387*l.*; Illyria, Croatia, and Dalmatia, 398,049*l.* and 721,412*l.*; Turkey, Wallachia, and Moldavia, 1,555,213*l.* and 1,986,970*l.*; Egypt, 901,711*l.* and 1,886,892*l.*; United States, 3,254,213*l.* and 4,385,601*l.*; Chili, 1,431,912*l.* and 996,195*l.*; British North America, 542,309*l.* and 365,865*l.*; other countries, 1.004,928*l.* and 558,103*l.* The value of wheat-meal and wheat-flour imported in the year 1868 was 2,832,077*l.*, against 3,519,577*l.* in 1867, and 3,796,911*l.* in 1866. The imports of wheat-meal and wheat-flour last year amounted in value to 545,724*l.* from Hanse Towns, 608,658*l.* from France, 610,251*l.* from the United States, 166,256*l.* from British North America, and 901,188*l.* from other countries. Other kinds of corn were imported in 1867 and 1868 respectively, to the following values:—Barley, 2,832,515*l.* and 3,799,527*l.*; oats, 4,319,908*l.* and 3,875,929*l.*; peas, 721,604*l.* and 549,313*l.*; beans, 870,475*l.* and 1,265,842*l.*; and Indian-

corn or maize, 3,834,734*l.* and 4,838,012*l.* The quantity of wheat imported in 1868 was 32,639,768 cwt., against 34,645,569 cwt. in 1867, and 23,156,329 cwt. in 1866. The imports of barley amounted to 5,683,721 cwt. in 1867, and 7,476,224 cwt. in 1868; of oats, to 9,407,136 cwt. in 1867, and 8,112,563 cwt. in 1868; of peas, to 1,586,129 cwt. in 1867, and 1,116,246 cwt. in 1868; of beans, to 1,982,615 cwt. in 1867, and 2,647,390 cwt. in 1868; and of Indian-corn or maize, to 8,540,429 cwt. in 1867, and 11,472,226 cwt. in 1868.

CORN IMPORTS, 1868–69.—According to the Trade and Navigation Accounts issued by the Board of Trade, the import of wheat into the United Kingdom, from the 1st of September 1868 to the 31st of August 1869 —that is to say, from harvest to harvest— amounted to 30,364,469 cwt., and of wheat-flour 4,285,569 cwt., making together 34,650,038 cwt.—equal to 8,243,406 qrs. Of barley the twelvemonth's import was 8,970,085 cwt.; of oats, 6,158,254 cwt.; of peas, 1,085,582 cwt.; of beans, 2,321,294 cwt.; of Indian-corn, 14,284,872 cwt. The total import of corn, therefore, in the twelvemonth ending the 31st of August, 1869, was 67,470,125 cwt.—equal to 17,110,405 qrs. The returns stated the import of wheat and wheat-flour in the previous twelvemonth at 39,482,902 cwt., and the total import of corn in that year at 66,241,042 cwt., being less than in the year ending with August, 1869, the import of barley and of Indian-corn being much less in the year 1867–68 than in the year 1868–69. In the twelvemonth ending the 31st of August, 1867, the import of wheat and wheat-flour was reported as only 32,260,841 cwt., and the total import of corn as 63,186,726 cwt.

WHEAT IMPORTS FROM THE UNITED STATES AND FROM RUSSIA.—The following tabular statement gives the imports of wheat for several years past from the United States in comparison with Russia:—

United States.		Years.		Russia.
Qrs.				Qrs.
465,658	..	1852	..	706,400
686,766	..	1853	..	1,053,460
402,140	..	1854	..	488,060
239,686	..	1855	..	War year
1,232,774	..	1856	..	731,286
626,652	..	1857	..	680,212
572,620	..	1858	..	589,542
35,538	..	1859	..	852,686
1,443,852	..	1860	..	1,252,954
2,414,864	..	1861	..	1,002,888
3,586,814	..	1862	..	1,278,004
1,934,310	..	1863	..	1,007,622
1,754,446	..	1864	..	1,137,606
261,692	..	1865	..	1,798,658
141,164	..	1866	..	1,986,044
930,668	..	1867	..	3,116,718
1,313,922	..	1868	..	2,234,136

CATTLE IMPORTS.—A total of 511,564 live-stock of all kinds were imported into the United Kingdom during the year 1868, consisting of 103,726 oxen and bulls, 11,143 cows, 21,819 calves, 323,447 sheep, 17,708 lambs, and 33,721 swine and hogs. An analysis of ports at which they were imported shows that 332,630 animals were brought to London, 70,909 to Harwich, 24,820 to Hartlepool, 27,662 to Hull, 11,109 to Newcastle, 9797 to Leith, 6305 to Plymouth, 2449 to Falmouth, 4107 to Liverpool, 5275 to Grimsby, 4325 to Portsmouth, 3429 to Southampton, 3042 to Sunderland, and 2762 to Dublin. Of those landed in London, 6293 were detained on account of disease or injury, consisting of 729 beasts, 58 calves, 5072 sheep, and 434 pigs. A comparison of statistics with those of former years shows that the trade had not recovered from the depression of 1867, and that the total quantity of animals imported did not reach half that brought in 1866. It is noteworthy that the importation of cattle from Spain and Portugal into the port of Liverpool has largely increased since the cessation of the cattle-plague. Although cattle imports have decreased considerably, the quantities of all kinds of dead-meat sent to London in 1868 was smaller by 28 per cent., and of fresh beef and mutton by 81 per cent., as compared with the statistics of the previous year.

TEA IMPORTS.—The Customs returns, published in 1869, show that 106,918,069 lb. of tea were entered for home consumption during the year 1868, the duty received on which amounted to 2,672,978*l.* sterling. Of this total amount, 72,817,102 lb. were entered in the port of London, or 98·99 per cent., being the largest quantity ever imported in one year.

SUGAR IMPORTS.—A Parliamentary return shows that in the year 1868 there were 6,805,659 cwt. of foreign sugar imported into the United Kingdom and entered for home consumption. 2,962,426 cwt. are returned as coming from Cuba, the largest importation ever received from that source; 1,210,414 cwt. from Brazil; and nearly 1,700,000 cwt. from the continent of Europe. The total import of foreign sugar in 1867 was 7,139,940 cwt.; and of sugar from all quarters entered for consumption, 11,697,328 cwt. The total for 1868 is stated in other returns at 11,892,832 cwt., but this was exclusive of deductions for over-entries and exports on drawback.

MALT, BARLEY, AND SUGAR CONSUMPTION.—An annual Parliamentary return, moved for by Mr. Locke, shows that in the year 1868 there were 44,533,274 bushels of malt charged with duty in England, 2,375,119 bushels in Scotland, and 2,795,538 bushels in Ireland. These quantities were larger than those of 1867, but smaller than those of 1866, except in the instance of Ireland. The duty charged in 1868 amounted to 6,039,825*l.* in England, 320,948*l.* in Scotland, and 378,934*l.* in Ireland. 7,476,224 cwt. of barley were imported into the United Kingdom in 1868, equivalent to 2,093,343 qrs.—a much larger quantity than in 1867, but less than in 1866. In the year ending at Michael-

mas, 1868, there were 37,611,106 lb. of sugar consumed in the United Kingdom in breweries, supplying the place of about 1,500,000 bushels of malt.

HOP IMPORTS.—The annual Parliamentary return shows that the import of hops into this country, which amounted to only 101,622 cwt. in the year ending at Michaelmas, 1867, reached 301,968 cwt. in the year ending at Michaelmas, 1868; our export of foreign hops being 4152 cwt. in the former, and 13,357 cwt. in the latter year. The quantity of British hops exported was 12,314 cwt. in the former, and 19,492 cwt. in the latter year. They went chiefly to Australia.

BEER EXPORTS.—In the year ending at Michaelmas, 1868, there were in the United Kingdom 2482 persons licensed as brewers. In the same year two brewers paid for licenses for brewing more than 600,000 barrels of beer, the license duty for the two together exceeding 16,000*l.* In the year ending at Michaelmas, 1868, 469,726 barrels of beer, of the declared value of 1,841,364*l.*, were exported from the United Kingdom, a smaller quantity than in the preceding year. The two great customers were India and Australia, India taking 170,362 barrels, of the value of 476,777*l.*, and Australia 112,210 barrels, of the value of 464,337*l.*

SPIRITS CONSUMPTION, 1865–68. — The number of gallons of proof-spirit distilled in the United Kingdom was 26,750,684 in 1865, 25,567,962 in 1866, 23,323,613 in 1867, and 24,928,155 in 1868. The quantity retained for consumption in the United Kingdom as beverage was 20,811,155 gallons in 1865; in 1866, 22,216,390 gallons; in 1867, 21,199,376 gallons; and in 1868, 21,008,634 gallons. All this time the population was increasing by about 1 per cent. per annum.

SPIRITS CONSUMPTION IN 1869.—In the first half of the year 1869, 10,060,736 gallons of home-made spirits paid duty for consumption as beverage in the United Kingdom—a larger quantity by 488,894 gallons than in the first half of 1868, but a rather smaller quantity than in the first half of 1867. In England the quantity in the first half of the year 1869 was 5,418,851 gallons, being 101,277 gallons more than in the corresponding period of 1868; in Scotland, 2,301,030 gallons, an increase of 252,390 gallons; in Ireland, 2,340,855 gallons, an increase of 135,227 gallons. In the same period (the first half of 1868) 1,852,328 proof gallons of foreign or colonial rum were entered for consumption in the United Kingdom, 1,499,674 proof gallons of imported brandy, and 558,253 proof gallons of other sorts of imported spirits (except Geneva) not sweetened or mixed.

WINE CONSUMPTION.—The following table shows the average consumption of wines during the four years 1856 to 1859, before the reduction of duty, and in the years 1864 and 1868:—

Years.	Spanish gallons.	Per cent. of total.	Portuguese gallons.	Per cent. of total.
1856 to 1859	2,783,831	39·58	2,201,305	30·99
1864	4,974,112	43·41	2.832,217	24·76
1868	6,181,588	46·38	2,853,470	20·58

Years.	French gallons.	Per cent. of total.	All other kinds. Gallons.	Per cent. of total.
1856 to 1859	600,932	8·55	1,505,978	20·88
1864	2,304,242	20·11	1,346,144	11·72
1868	4,501,931	23·50	1,615,752	9·54

Years.	Total consumption of gallons.	Population.
1856 to 1859	7,092,046	28,200,000
1864	11,456,715	29,674,320
1868	15,151,741	30,400,000

Years.	Bottles per head.	Revenue. £
1856 to 1859	1 & 4-10ths.	1,900,000
1864	2 & 3-10ths.	1,319,261
1868	3	1,521,199

SALT EXPORTS.—The quantity of salt made in Cheshire in the year 1868 is stated at 1,250,000 tons, the same quantity as that reported in the preceding year; but the quantities sent down the River Weaver show a large increase; the quantity of rocksalt sent down in the year ending with March, 1869, reaching 58,696 tons of 26 cwt., and of white salt 901,566 tons, making a total of 960,262 tons. The returns of the quantity of salt made in Worcestershire show 240,000 tons in 1868—namely, 115,000 tons at Droitwich, and 125,000 tons at Stoke Prior. In Ireland the quantity in 1868 was 23,840 tons, an increase of 4151 tons over the preceding year. The export of salt from the United Kingdom continues to increase. In 1865 it was 579,050 tons; in 1866, 601,440 tons; in 1867, 724,333 tons; in 1868, 797,502 tons. The declared value of the salt exported in 1868 was 485,537*l.* The increase is chiefly in the exports to India and to Russia.

COAL EXPORTS.—The annual Parliamentary return shows that in the year 1868 there were 10,837,804 tons of coals, cinders, and culm, of the declared value of 5,352,525*l.*, exported from the United Kingdom—an increase of 422,026 tons over 1867, but a decrease in declared value. Above 1,900,000 tons were exported to France; 10,575,275 tons were shipped coastways from port to port of the United Kingdom, a less quantity than in 1867 by 724,115 tons; 5,976,452 tons of coal were brought into the port of London

in 1868, being 353,098 tons less than in 1867; 2,981,230 tons came coastwise, and 2,995,222 tons by inland navigation and by railway.

THE SOUTH WALES PORTS' WELSH COAL EXPORTS.—From a Parliamentary return it appears that during the year 1868, Cardiff exported 2,143,301 tons of coal, 14,193 tons cinder, 254,128 tons patent fuel; Newport, 331,750 tons of coal, 1157 tons cinder; Swansea, 514,366 tons of coal, 3248 tons cinder, 1050 tons culm, 73,399 tons patent fuel; Neath, 45,578 tons of coal, 1664 tons culm; Porthcawl, 21,526 tons of coal, 3459 tons cinder; and Llanelly, 116,636 tons of coal, 11,970 tons culm. As a whole, these figures show a considerable increase over 1867, the principal exception being the Swansea return of patent fuel, which showed a falling-off of 32,000 tons. The shipments coastwise from Cardiff in 1868 were 786,853 tons coal; Newport, 645,790 tons coal; Swansea, 206,060 tons coal, 42,275 tons culm; Neath, 137,435 tons coal, 61,846 tons culm; Port Talbot, 77,128 tons coal; Porthcawl, 108,254 tons coal; Llanelly, 171,488 tons coal, 9393 tons cinder; and Milford, 23,570 tons coal, 26,254 tons culm. As compared with 1867, there was a decrease in the shipments from all the ports with the exception of Porthcawl.

MACHINERY EXPORTS.—During the six months ending June 30, 1869, the value of the machinery exported was 1,472,572*l*., as compared with 1,269,756*l*. in the corresponding period of 1868, and 1,390,216*l*. in the first six months of 1867. In these totals the shipments for June figured for 315,423*l*., against 269,138*l*. in June 1868, and 299,786*l*. in June 1867. The increase observable in the exports for 1869 arose in the shipments to Russia, Belgium, and Australia. Thus the value of the machinery exported to Russia in the first half of 1869 was 189,533*l*., against 118,464*l*. and 151,845*l*. respectively; to Belgium, 94,468*l*., against 68,970*l*. and 77,924*l*.; and to Australia, 102,740*l*., against 43,895*l*. and 38,306*l*. There was also some increase in 1869 in the value of the exports to the Netherlands, Egypt, and British India; but, on the other hand, the demand for British machinery appears to have decreased as regards France and Spain.

COTTON IMPORTS.—It appears that the total quantity of raw cotton imported into the United Kingdom in 1868 was 1,328,084,016lb. The imports of the ten years 1859–68 were as follows:—1859, 1,225,989,072 lb.; 1860, 1,390,938,752 lb.; 1861, 1,256,984,736 lb.; 1862, 523,973,296 lb.; 1863, 669,583,264 lb.; 1864, 891,304,720 lb.; 1865, 977,978,288 lb.; 1866, 1,377,129,936lb.; 1867, 1,262,536,912lb.; and 1868, 1,328,084,016 lb. It will be seen that the receipts of 1868 were very large, although scarcely up to the mark of 1860 or 1866. The present comparative dearth of raw cotton in the manufacturing districts is consequently attributable not so much to decreased supplies as to increased consumption.

COTTON PURCHASES.—The amount paid for the raw cotton imported into the United Kingdom in 1869 was very considerable, having amounted, in the three months ending March 31, to 11,208,055*l*., as compared with 11,281,523*l*. in the corresponding period of 1868, and 12,119,848*l*. in the corresponding period of 1867. The value of the cotton imports effected during the ten years ending 1868 (inclusive) was as annexed:—

1859,	34,559,636*l*.;	1860,	35,756,889*l*.;
1861,	38,653,398*l*.;	1862,	31,093,045*l*.;
1863,	56,277,951*l*.;	1864,	78,203,729*l*.;
1865,	66,032,193*l*.;	1866,	77,521,406*l*.;
1867,	51,999,537*l*.;	and 1868,	55,198,522*l*.

WOOL IMPORTS.—The imports of wool into the United Kingdom presented a considerable augmentation in 1869, having amounted, in the four months ending April 30, to 76,587,821 lb., as compared with 43,757,851 lb. in the corresponding four months of 1868, and 54,673,609 lb. in the corresponding four months of 1867. The increase occurred almost wholly in the receipts of wool from the Australasian colonies, which amounted in the first four months of this year to 52,003,415 lb., as compared with 24,139,153 lb. in the corresponding period of 1868, and 32,708,929 lb. in the corresponding period of 1867. The Australias now send us about three times as much wool as they did twenty years ago.

BULLION AND SPECIE IMPORTS AND EXPORTS.—The value of gold and silver bullion and specie imported in the year 1868, was 24,852,595*l*., against 23,821,047*l*. in the previous year. Of the total value imported in 1868, there was 17,136,177*l*. returned under the head of gold, the chief portion of which was received from Australia, 6,989,594*l*.; United States, 6,976,455*l*.; and Mexico, South America (except Brazil), and West Indies, 1,252,816*l*. The imports of silver bullion and specie in 1868 amounted to 7,716,418*l*., of which 3,203,972*l*. was received from Mexico, South America (except Brazil), and West Indies, 1,915,939*l*. from the United States, and 1,045,317*l*. from France. The value of gold and silver bullion and specie exported in the year 1868 was 20,220,014*l*., against 21,670,687*l*. in 1866, and 14,327,289*l*. in 1867. Of the total value exported last year, 12,708,308*l*. is registered as gold, the chief portion of which was sent to the following countries:—viz., to France, 7,189,646*l*.; to Egypt, 1,497,826*l*.; to the Hanse Towns, 1,094,311*l*.; and to Brazil, 1,013,240*l*. The exports of silver bullion and specie in 1868 amounted to 7,511,706*l*., of which 1,855,253*l*. was sent to Holland, 1,821,748*l*. to France, 1,439,165*l*. to Egypt, 903,669*l*. to the Hanse Towns, and 843,235*l*. to Belgium.

BOOK IMPORTS AND RE-EXPORTS. — A curious and entirely new Parliamentary return was issued in the session of 1869, giving the quantities and value of books printed in foreign countries and British possessions, imported into, and re-exported from, the United Kingdom. From this it appears that

the real value of foreign books imported into the United Kingdom was 80,107*l.* in 1858, and 135,180*l.* in 1868; those from British possessions being valued at 3491*l.* in 1858, and 2400*l.* in 1868. A review of the quantities imported, shows that during the year 1868 France sent 4102 cwt., the Hanse Towns 2881 cwt., Holland 1080 cwt., the United States 1157 cwt., and Belgium 513 cwt. The total weight of books imported from foreign countries and British possessions was 5971 cwt. in 1858, and 10,695 cwt. in 1868. The declared value of books re-exported from the United Kingdom to foreign countries was 3556*l.* in 1858, and 7879*l.* in 1868; the weight being in the former case 255 cwt., and in the latter 450 cwt. Those re-exported to British possessions were valued at 2950*l.* in 1858, and 2101*l.* in 1868. Thus it is observable that the importation of books from foreign countries, and their re-exportation from the United Kingdom, doubled in quantity and value during the ten years 1858–1868, but that the importation and re-exportation of books to and from British possessions diminished in the same period. The declared value of books printed in the United Kingdom and exported to foreign countries rose from 205,699*l.* in 1858 to 366,020*l.* last year, and to British possessions from 184,885*l.* to 318,223*l.* sterling.

Shipping Statistics. — The following statement shows the number and tonnage of the vessels engaged in the foreign trade of the United Kingdom in the year 1868:— 27,291 British and British-colonial vessels, of 9,571,766 tons, were entered inwards with cargoes at ports of the United Kingdom, an increase of 241 vessels and of 216,307 tons over the numbers in 1867; and 18,688 foreign vessels, of 4,279,551 tons, an increase of 834 vessels and of 294,293 tons over 1867—the total being 45,979 vessels, of 13,851,317 tons, an increase of 1075 vessels and of 510,600 tons over 1867. The clearances outwards in 1868, also with cargoes, comprised 31,775 British and British-colonial vessels of 10,901,685 tons, an increase of 722 vessels and of 315,315 tons over 1867; and 21,133 foreign vessels, of 4,573,307 tons, an increase of 732 vessels and of 312,060 tons—the total being 52,908 vessels, of 15,474,992 tons, an increase of 1454 vessels and of 627,375 tons. 477 vessels, of 458,070 tons, of United States nationality were entered inwards with cargoes in 1868, an increase of 38 vessels and of 2873 tons over 1867; and 608 vessels, of 564,132 tons, of United States' nationality cleared outwards with cargoes, an increase of 91 vessels and of 49,169 tons. The United States' shipping thus entered and cleared here in 1868 was about half the amount it reached before the recent Civil War. Classing the shipping of 1868 according to the sources of trade, we find that 40,246 vessels, of 11,101,652 tons, entered inwards here with cargoes, came from foreign ports, an increase over 1867 of 961 vessels, and of 412,696 tons; and 5733 vessels, of 2,749,665 tons, arrived from British possessions, an increase of 114 vessels and of 97,904 tons. Of the shipping cleared outwards with cargoes in 1868, 47,178 vessels, of 12,593,998 tons, departed to foreign countries, an increase of 1251 vessels and of 620,619 tons over 1867; and 5730 vessels, of 2,880,994 tons, departed for British possessions, an increase of 203 vessels and of 6756 tons. The shipping employed in the coasting trade of the United Kingdom showed a decrease in 1868 as compared with 1867. 135,439 vessels, of 17,701,999 tons, were entered inwards with cargoes, a decrease of 6637 vessels and of 745,932 tons; and 138,843 vessels, of 17,826,062 tons, cleared outwards, a decrease of 4999 vessels and of 580,350 tons.

Our Mercantile Navy.— In the year 1868, the registered shipping of the United Kingdom (exclusive of river-steamers) employed in our home and foreign trade comprised the unprecedented number of 22,250 vessels, of 5,516,434 tons, employing 197,502 men, exclusive of masters—viz., 20,525 sailing-vessels of 4,691,820 tons, employing 153,840 men; and 1725 steam-vessels of 824,614 tons, employing 43,662 men. At the end of the year 1868, there stood registered, as belonging to the United Kingdom, 28,444 vessels of 5,780,530 tons—viz., 25,500 sailing-vessels of 4,878,233 tons, and 2944 steam-vessels of 902,297 tons. This is the highest tonnage ever recorded. There were built and registered in the United Kingdom, in 1868, 879 sailing-vessels of 300,477 tons, and 232 steam-vessels of 79,096 tons.

Chief Ports of the Kingdom.—In the year 1868, the number of vessels entered and cleared at the port of London (including their repeated voyages) in the coasting, colonial, and foreign trade, was 40,162, of 10,529,068 tons in the aggregate; at Liverpool, 23,938 vessels, of 9,277,714 tons; at the Tyne ports—25,089 vessels of 5,186,219 tons at Newcastle, 2537 of 427,293 tons at Shields, and 1182 of 335,763 tons at South Shields; at Cardiff, 16,645 vessels, of 3,143,618 tons; at Sunderland, 16,392 vessels, of 2,946,391 tons; at Hull, 8412 vessels, of 2,233,825 tons; at Swansea, 14,584 vessels, of 1,642,905 tons; at Hartlepool, 8807 vessels, of 1,481,827 tons; at Southampton, 5454 vessels, of 1,396,381 tons; at Bristol, 12,217 vessels, of 1,286,233 tons; at Newport, 10,510 vessels, of 1,109,941 tons; at Plymouth, 5472 vessels, of 857,467 tons; at Grimsby, 3027 vessels, of 725,674 tons; at Dover, 4002 vessels, of 591,797 tons. In Scotland, the return of vessels entered and cleared in 1868 was 8830, of 2,161,050 tons, at Glasgow; 4134, of 980,410 tons, at Leith; 3073, of 714,522 tons, at Greenock; 2929, of 573,650 tons, at Aberdeen. In Ireland, there were 11,219 vessels, of 2,337,157 tons, at Dublin; 10,198, of 1,887,719 tons, at Belfast; 3630, of 839,220 tons, at Cork; and 3208, of 767,867 tons, at Waterford.

Inland Bonding Towns.—An official return shows the amount of Customs business transacted in the year 1868 at inland bond-

ing towns. At Manchester, Customs duty amounting to 133,064*l.* was collected, and 10,712 lockers' orders were issued for the delivery of goods from warehouse; at Leeds, the Customs duty collected was 95,824*l.*, and the lockers' orders issued were 2,723; at Halifax, the Customs duty was 15,381*l.*, and the lockers' orders, 783; at Bradford, Customs duty, 40,785*l.*, and lockers' orders, 2164. 22,821*l.* was collected at Manchester in the year, on behalf of the Inland Revenue Department, for duties on British spirits deposited in the Customs warehouses; 9044*l.* at Leeds, 10,069*l.* at Halifax, 9001*l.* at Bradford. The year's cost of the Customs establishment at Manchester was 1590*l.*; at Leeds, 589*l.*; at Halifax, 563*l.*; at Bradford, 633*l.* The amount of Customs duty collected at Manchester in 1868 showed an increase of 7548*l.* (attributed to some improvement in the condition of the manufacturing district); at Leeds, an increase of no less than 38,126*l.* (attributed to the trade in tobacco, merchants in surrounding towns availing themselves of the privilege of bonding at Leeds); at Halifax, an increase of 1653*l.*; and at Bradford, an increase of 5738*l.*

IRISH FLAX TRADE.—Ireland seems to be advancing in the manufacture of flax to an extent which could hardly have been anticipated a few years ago. In 1839 only 9017 persons were employed in this branch of industry in Ireland; in 1850 the number had risen to 21,121; in 1856 it was 28,573; in 1861, 33,525; and in 1868 no less than 57,050—an increase of 70 per cent. in this last brief period. The number of persons employed in flax factories in England and Wales in 1868 was but 21,859, in Scotland 40,020, in Ireland 57,050. There were in Ireland, in 1868, 143 flax factories, containing 894,273 spinning-spindles, and 12,969 power-looms; in 1861 there were only 100 factories, with 592,981 spindles, and 4,666 power-looms. The amount of moving-power increased from 10,710 steam and 2384 water, in 1861, to 21,595 steam and 3466 water in 1868. The flax factories in Ireland have always employed twice as many females as males, and in 1862 the numbers had become 9953 males and 23,572 females; but the returns of 1868 show no marked further tendency to the introduction of a larger proportion of female labour. In 1868 the number of males employed was 16,782—an increase of nearly 69 per cent. since 1861; and the number of females was 40,268—an increase of less than 71 per cent. There was, however, in that period an increased employment of child-labour in the flax factories of Ireland; the total number of children under 13 years of age was 668 in 1861, and 1374 in 1868—an increase of 106 per cent.; and the number of female children increased from 442 to 1031, or 133 per cent. But the number of children under 13 who are employed in the Irish flax factories is still by no means large; it is less than 2½ per cent. of the whole number of persons employed. The flax manufacture is found in 14 counties of Ireland. Antrim takes the lead, and employs nearly 32,000 persons in this industry—a number unequalled in any other county in the United Kingdom. Antrim is followed, with a long interval, by Down, Armagh, Tyrone, Louth, Kildare, and Cork; and these by Tipperary, Donegal, Londonderry, Monaghan, Dublin, Waterford, and Galway.

SCOTTISH FISHERIES.—The British Fishery Commissioners report that in the year 1868 the quantity of herrings cured was 651,434 barrels; branded, 209,462 barrels; exported, 368,745 barrels. At most of the stations on the north-east coast of Scotland so poor a herring-fishery was not experienced since 1834, and compared with 1867 (which was almost the best year upon record) 1868 is contrasted greatly—showing a decrease of 174,155 barrels in the quantity cured, 107,958 in the barrels branded, and 109,959 in the barrels exported. The returns for the cod and ling fishery show that, in 1868, 113 831 cwt. were cured dried—a decrease of 5807 from the quantity in the preceding year; 9659 barrels were cured in pickle—a decrease of 1160; and 52,403 cwt., cured dried, were exported—an increase of 6178 cwt. 14,300 boats, manned by 46,417 fishermen and boys, were employed in the herring and cod and ling fisheries in 1868—an increase of 92 boats, and 198 men and boys: and the value of the boats, nets, and lines was estimated at 1,041,809*l.*—an increase of 21,621*l.*

4.—AGRICULTURE.

WHEAT.—The area of the United Kingdom, 77,513,585 statute acres, gives an average of rather more than 2¼ acres per head of population. The cultivated area under any kind of crop, bare fallow, or grass (including probably some parts lying waste, but capable of cultivation), is officially returned as comprising, in 1868, 45,652,545 acres, or about an acre and a half per head. The acreage under wheat in 1868 is returned at 3,951,018 acres, or rather more than an acre for every eight persons. The field of production of wheat is chiefly England, where there were 3,396,890 acres under that crop in 1868, being about an acre to every six persons. Dividing England, by a line drawn from north to south, into corn and grazing counties (21 of each), we find on the east side of the dividing line, the corn-growing side, nine counties distinguished above the others for the large area devoted to wheat. The East Riding of Yorkshire had 123,268 acres under wheat in 1868; Lincoln, 307,518 acres; Cambridge, 131,550; Norfolk, 205,867; Suffolk, 160,167; Hants, 117,852; Essex, 193,175; Kent, 110,720; and Sussex, 104,847 acres. These nine counties have together nearly a million and a half acres under wheat. The other

12 counties on the same side of the kingdom have smaller areas growing wheat, but some have a large proportion of their acreage so applied. Huntingdon shows 50,187 of its 230,000 acres devoted to wheat; Bedford, 53,819 of its 296,000; Warwick, 80,547 acres; Hertford, 62,717; Berks, 64,335; Notts, 74,352; and Oxford, 64,119 acres. Northampton counts 81,988 acres under wheat; Bucks, 59,909; Surrey, 44,901; Rutland, 10,008; and Middlesex, 9138 acres. These 21 counties, occupying the eastern half of England, and having in 1868 nearly eleven million acres in cultivation, had together 2,111,000 acres under wheat; and not one, except the metropolitan counties of Middlesex and Surrey, had so little as 10 per cent. of its entire area under wheat. Turning now to the 21 counties on the western side, which had rather more than twelve million acres in cultivation (crops, bare fallow, and grass), but only 1,286,000 acres under wheat, we find only five counties—Salop, Worcester, Hereford, Gloucester, and Wilts—with so much as 10 per cent. of their entire area under wheat. The northern counties are far below that ratio. Northumberland had only 43,390 acres under wheat in 1868; Cumberland, 26,390; Durham, 46,557; and Westmoreland, 2435 acres. The North Riding had only 83,584, and the West Riding only 109,236; Lancashire but 38,071. In the midland districts Cheshire could reckon as under wheat only 39,431 of its 707,000 acres; Derby, 33,585 of its 659,000; Stafford, only 60,092; Leicester, 48,422; Salop, 89,495; Worcester, 72,202; Hereford, 62,821 of its 535,000 acres (406,000 in cultivation); Monmouth, 22,224; and Gloucester, 97,048. In the south-western district, Wilts had 103,522 acres under wheat; Dorset, 48,299; Somerset, 80,548; Devon, 125,495; and Cornwall, 53,059. Wales—with its area of 4,734,486 acres, 2,503,646 acres cultivated—shows only 130,552 acres growing wheat, or an acre to every nine of its population of 1,198,144. Flint returns as many as 16,201 acres of wheat; Denbigh, 19,789; and Montgomery, 22,358 acres. Scotland cannot boast a climate so well suited for wheat as that of England. With an area of 19,639,377 acres, and a population of 3,188,125, it had in 1868 no more than 124,683 acres under wheat, rather more than an acre to every 26 persons. Among the largest acreages of this crop are those of Fife, 20,461 acres; Forfar, 12,453; and the great county of Perth, 14,975 acres. The Lothians show 13,204 acres under wheat in Haddington, 6814 in Edinburgh, and 2816 in Linlithgow. Sutherland, with its 1,200,000 acres, shows but 105 growing wheat; Inverness, with its 2,700,000 acres, only 1286; and Argyll, with its 2,000,000, only 115. Thus, Great Britain, with its area of 56,964,260 acres, and population of 24,837,502, had in 1868 3,652,125 acres growing wheat, or rather more than an acre for every seven persons. Ireland is not a wheat country. In 1868 its population of 5,532,343 persons grew wheat upon 286,790 of their 20,322,641 acres, 15,576,270 of which were under crops, bare fallow, or grass. It was less than an acre under wheat for 19 persons. The chief wheat-growing counties are Cork, which gave to this crop, in 1867, 28,427 acres; Waterford, 15,770 acres; Wexford, 16,349; Kilkenny, 28,953; Tipperary, 30,266; Limerick, 11,265; and Down, 22,606 acres—the only county in the North of Ireland growing much wheat. The quantity of land applied to wheat in Ireland has long been diminishing; oats and potatoes are the well-known favourits crops.

BARLEY.—The official agricultural returns show an acreage under barley in England in 1868 of 1,780,201 acres, or 112,000 less than in 1867, although a larger number of returns was obtained in 1868; but more acreage was devoted in 1868 to the growth of wheat. The total area under barley in the United Kingdom in 1868 is returned as 2,348,068 acres. The great barley-field of the kingdom shows in each of its counties a decrease: the return for Essex is 97,829 acres under this crop; Suffolk, 130,068; Norfolk, 182,697; Lincolnshire, 130,531 acres. The other counties of England devote less land to barley. The south-western counties, however, give it a good acreage—Cornwall, 48,858 acres; Devonshire, 77,959; Dorsetshire, 37,275; Somersetshire, 32,687; Wilts, 63,047 acres. Hampshire applied 65,938 acres to barley, and Kent 38,179 acres; Surrey and Sussex smaller areas, 17,084 and 24,187 acres. Eight midland counties gave above 30,000 acres to this crop in 1868—Gloucestershire, 38,134; Berks, 36,722; Oxfordshire, 49,369; Herts, 42,902; Northamptonshire, 49,507; Cambridgeshire, 52,963; Nottinghamshire, 46,456; Salop, 50,340 acres. Lancashire, which grows so little corn, returns only 6948 acres under barley, a quantity exceeded by the smallest county in England; and Lancashire is one of the dozen counties with more than a million acres, and has the largest number of mouths to feed. The West Riding of Yorkshire shows 66,406 acres in barley; the North Riding, 54,376; the East Riding, 45,988 acres. Some of the northern counties apply but small areas to this crop, but Northumberland gives it 29,084 acres. Wales shows 151,608 acres of barley, a larger number than of wheat. The south-western counties of Pembroke, Carmarthen, and Cardigan supply nearly half this area. Scotland gives 219,515 acres to barley, a much larger quantity than to wheat. The chief field is in the east; Roxburgh, Berwick, Haddington, Fife, Perth, Forfar, Aberdeen, range from 25,000 acres in Fife and Forfar to 12,000 in smaller Haddington. Ireland had in 1868 188,252 acres growing barley, a larger quantity than in any year since 1862. It is chiefly grown in Wexford, Queen's County, Louth, Cork, Kildare, and King's County; the first two having in 1867 41,513 and 22,657 acres respectively under barley, the other four ranging from 10,000 to 19,000 acres.

OATS.—Of all our corn-crops oats have the largest acreage appropriated to them. The official agricultural returns show that the

area under oats in the United Kingdom in 1868 amounted to 4,469,387 acres, or nearly a tenth of the cultivated area under all kinds of crops, bare fallow, and grass. In England, however, the area under oats was only 1,488,470 acres, being not half the area applied to wheat, and not one-fifteenth of the entire cultivated area. There is an extensive growth of oats in some parts of the South of England; Cornwall gave to this crop in 1868 as many as 42,891 acres; Devon, 84,492 acres; Hants, 66,568 acres; Sussex, 65,792 acres; Kent, 53,016 acres; Essex, 44,110 acres. Large quantities are grown in the fen districts: Norfolk shows 33,488 acres of oats; Cambridge, 38,178 acres; Lincoln, 105,096 acres. The crop is not very much cultivated in the midland districts except in the north-western parts. Stafford had in 1868 30,594 acres growing oats; Chester, 44,022 acres; Lancaster, 51,537 acres. The north is favourite ground for this cereal. Yorkshire counts as many as 211,726 acres under oats in 1868, and the northern counties beyond give them a large acreage—Durham, 41,548 acres; Cumberland, 72,627 acres; Northumberland, 68,816 acres. Wales shows 257,153 acres under oats, nearly double the quantity applied in growing wheat, and amounting to more than a tenth of the cultivated area of that principality. The extensive county of Carmarthen takes the lead, giving to this crop in 1868 no less than 43,709 acres. The climate of Scotland is well suited for the growth of this hardy cereal, and it is far more extensively cultivated there than any other grain. In 1868 Scotland had under oats 1,011,430 acres, approaching a fourth of the whole cultivated area of that country, exclusive only of heath and mountain land; oats had four times the area given to barley and eight times the area under wheat. Dumfries shows 49,080 acres under oats; Ayr, 52,518; Lanark, 46,226; Fife, 40,103; Perth, 65,287; Aberdeen, 191,291; Banff, 54,531 acres. In Ireland there are three acres of oats for one of other corn-crops. In 1868 there were 1,699,919 acres under oats, nearly a ninth part of the cultivated area of Ireland. Down and Tyrone give 119,000 acres each to oats, and Cork 137,000 acres. There is not a county in England, Wales, Scotland, or Ireland which does not grow oats.

AGRICULTURAL SURVEY OF THE UNITED KINGDOM.—The following table, drawn up from the returns of the Statistical Department of the Board of Trade, gives a comprehensive survey of the state of agriculture in the United Kingdom, showing the acreage under each description of crop, fallow, and grass, as well as the number of cattle, sheep, and pigs in Great Britain and in Ireland, separately, and in the whole of the United Kingdom, including the Channel Islands, in 1869:—

DESCRIPTION OF CROPS AND LIVE STOCK.	Great Britain.	Ireland.	United Kingdom.
CORN CROPS.	Acres.	Acres.	Acres.
Wheat	3,652,125	285,150	3,949,378
Barley or Bere	2,151,324	188,332	2,348,148
Oats	2,757,053	1,701,645	4,471,113
Rye	46,896	7,892	54,865
Beans	529,900	8,813	538,943
Peas	296,234	1,147	297,602
Total	9,433,532	2,192,979	11,660,049
GREEN CROPS.			
Potatoes	541,543	1,034,681	1,584,041
Turnips and Swedes	2,165,142	320,094	2,495,564
Mangold	249,041	19,031	268,744
Carrots	13,265	3,789	17,815
Cabbage, Kohl, Rabi, and Rape	115,083	42,268	157,525
Vetches, Lucerne, and any other Crop (except Clover or Grass)	301,792	36,264	341,188
Total	3,385,866	1,456,127	4,864,877
OTHER CROPS, GRASS, &C.			
Flax	17,543	206,483	224,034
Hops	64,488	..	64,488
Bare Fallow or Uncropped Arable Land	958,221	24,017	984,246
Clover and Artificial and other Grasses under Rotation.	3,960,008	1,691,797	5,690,318
Permanent Pasture, Meadow, or Grass not broken up in Rotation (exclusive of Heath or Mountain Land)	12,136,036	10,003,918	22,164,584
LIVE STOCK.	No.	No.	No.
Cattle	5,423,981	3,620,352	9,083,416
Sheep	30,711,396	4,822,444	35,607,812
Pigs	2,308,539	862,443	3,189,167

5.—POPULATION.

NUMBERS OF THE POPULATION IN 1869.—The Registrar-General of England estimated the population of the United Kingdom in the middle of the year 1869, at 31,015,234; or, excluding the army, navy, and merchant seamen abroad, and reckoning only the persons actually in the United Kingdom, 30,621,431—viz., 21,869,607 in England and Wales, 3,205,481 in Scotland, and 5,546,343 in Ireland. This is an increase of 240,644, as compared with the numbers in the United Kingdom in the middle of 1868—viz., an increase of 220,230 in England, 17,356 in Scotland, 3058 in Ireland.

TOWN BIRTH-RATES.—In the Registrar-General's return for the half-year ending the 30th of June, 1869, there was given a comparison of the birth-rates to every 1000 of population in the large towns of the kingdom, in each of the two quarters ending the 30th of June, 1868 and 1869, respectively, showing the following results:—Salford, 42·17 and 40·86; Glasgow, 45·59 and 42·96; Edinburgh, 41·15 and 39·14; Newcastle-on-Tyne, 40·10 and 37·83; London, 36·75 and 33·63; Bristol, 34·46 and 31·40; Birmingham, 37·63 and 35·24. The birth-rates to 1000 of population in 46 large town districts of England, in each

of the two quarters ending the 30th of June, 1868 and 1869, respectively, were :—In Chatham, 31·69 and 33·81; Brighton, 29·73 and 30·75; Portsmouth, 33·90 and 31·23; Gosport, 30·95 and 25·47; Southampton, 31·11 and 30·59; Northampton, 42·22 and 36·60; Ipswich, 30·88 and 27·24; Yarmouth, 36·65 and 33·45; Norwich, 32·46 and 31·53; Exeter, 31·81 and 32·77; Plymouth, 31·81 and 28·53; East Stonehouse, 42·71 and 42·19; Devonport, 28·79 and 34·19; Bath, 25·69 and 24·33; Cheltenham, 26·78 and 26·54; Stoke-upon-Trent, 47·59 and 44·50; Wolverhampton, 41·78 and 35·08; Walsall, 39·63 and 34·45; Dudley, 42·13 and 34·75; Worcester, 37·97 and 28·69; Coventry, 30·30 and 26·97; Leicester, 41·22 and 39·84; Nottingham, 37·02 and 28·52; Derby, 38·47 and 37·94; Stockport, 36·10 and 31·13; Macclesfield, 30·46 and 31·09; Chester, 42·43 and 35 ; Birkenhead, 39·63 and 32·17; Wigan, 44·15 and 41·67; Bolton, 43·62 and 43·61; Bury, 37·15 and 33·27; Ashton-under-Lyne, 35·96 and 29·76; Oldham, 38·38 and 33·26; Rochdale, 36·29 and 32·30; Blackburn, 43·52 and 36·83; Preston, 40·87 and 32·85; Huddersfield, 38·12 and 31·42; Halifax, 39·17 and 33·82; York, 33·69 and 30·93; Sunderland, 39·76 and 39·53; South Shields, 46·89 and 42·89; Gateshead, 47·84 and 41·54; Tynemouth, 36·13 and 35·19; Cardiff, 40·44 and 34·21; Merthyr Tydfil, 39·64 and 37·13; Swansea, 41·23 and 39·75.

CHANCES OF MARRIAGE.—The Registrar-General states, that of every 1000 unmarried men of the ages of 20 and under 25, living in England and Wales in 1868, there were 118·6 who married during the year; of 1000 unmarried women of the same ages living, 134·8 became wives; at the ages 25-30 years, 147·6 per 1000 unmarried men and 1000·9 unmarried women contracted marriage in the year. After that age, the proportions decrease more rapidly in the case of females; at the ages 30-35 the numbers were 109·8 per 1000 males and 60·8 females; at ages 35-40, there were 81·0 males and 42·2 females; at 40-45, there were 63·8 males and 31·3 females. He shows that the probability of unmarried women of these last ages marrying during the year is about that of the unmarried men. At the several ages after 45, the proportions per 1000 of bachelors who became husbands, decreased from 43·1, at ages 45-50, and 16·5 at ages 60-65, to 1·66 at ages 75-80. The chances of the spinsters becoming wives during the year diminished more rapidly, the proportions per 1000 being 22·5 at ages 45-50, 3·97 at ages 60-65, and 0·06 at ages 75-80. The mean ages of the persons who married, including those remarrying, was 28·0 years for the men and 25·8 years for the women. Excluding the widowers and widows, the mean age of those contracting marriage for the first time was 25·8 years for the bachelors, and 24·5 for the spinsters.

IRISH REGISTRAR-GENERAL'S RETURN.—The Irish Registrar-General's return for 1868 states that the number of births registered in Ireland in the year was 146,108, and of deaths 86,803—representing a natural increase of population amounting to 59,305; but as the number of emigrants who left the ports of Ireland in the year was 61,018, the result would appear to be a decrease of 1713 in the population. It is worthy of notice that in three of the four quarters of the year 1868, the Registrar-General returned the population as increasing; and only in one quarter (the spring quarter) was the emigration large enough to absorb the registered natural increase. But the real and the registered increase are different things, for it is acknowledged that the existing registration is far below the real numbers. If the birth-rate and death-rate of Ireland were, in fact, the same as in England, the natural increase in 1868, instead of being only 59,305, was above 78,000.

6.—PAUPERISM.

PAUPERISM IN ENGLAND AND WALES.—The number of paupers in England and Wales on the 1st of January, 1869, is stated at 1,046,569, in an official return prepared by the Poor Law Board. This was an increase of 6466, or 0·6 per cent., over the number a year before. 168,417 were indoor paupers, an increase of 5337; and 878,152 were outdoor paupers, an increase of 1129. 183,162 were adult able-bodied paupers—a decrease of 2468, or 1·3 per cent.; 51,695 of these were males, of whom 11,268 were in the workhouse, and 40,427 were receiving outdoor relief; and the other 131,467 were females—18,558 in the workhouse, and 112,909 receiving outdoor relief. Children under 16, if relieved with able-bodied parents, are classed as able-bodied, and consequently the whole number of able-bodied persons in receipt of relief on the 1st of January, 1869, is stated as 473,189. The not able-bodied were 521,759; the insane, 44,817; vagrants, 7020. Classed in another way, the numbers are as follows :—Men, 223,078; women, 438,515; children under 16, 378,172; vagrants, 7020; not classed by sex. The proportion of paupers therefore was, on the 1st of January, 1 in 19 of the population, or 5·3 per cent. The number in the metropolis was 156,109, a decrease of 7070, as compared with the 1st of January, 1868; in the south-eastern division, 107,220, an increase of 1753; in the south-midland, 88,801, an increase of 4207; in the eastern, 83,463, an increase of 2176; in the south-western, 117,142, an increase of 2358; in the west-midland, 114,185, a decrease of 218; in the north-midland, 58,688, an increase of 1139; in the north-western, 111,444, a decrease of 3134; in Yorkshire, 71,655, an increase of 1396; in the northern division, 52,754, an increase of 992; in the Welsh, 85,108, an increase of 2867. This census on the 1st of January, it must be noted, was taken at an unfavourable period

of the year; on the 1st of July, 1868, the number of paupers was less by 75,000. On the other hand, nearly 1 per cent. have to be added to the figures on account of parishes not under the Poor Law Board, and making no return.

PAUPERISM IN SCOTLAND.—The annual report of the Board of Supervision of the Poor in Scotland shows that that country, like England, feels an increasing pressure of pauperism. In the ten years 1858-68 the number of registered poor relieved annually increased from 97,809 in 1858-59 to 104,541 in 1867-68, and the number of their dependents from 47,770 to 69,205; the number of casual poor from 37,789 to 53,831, and of their dependents from 30,111 to 47,502; but a large proportion of these casual poor have been enumerated also as registered poor. On the 14th of May, 1868, the number of registered poor in Scotland was 80,032, with 48,944 dependents, and of casual poor 3,592, with 3668 dependents; making a total of 126,236 in a population of about 3,187,000, or rather more than a seventh of the population of England. The expenditure for the relief and management of the poor, which ten years ago was 657,366*l.* in the year, rose to 863,202*l.* in the year ending the 14th of May, 1868, showing the unusually large increase over the preceding year of 55,571*l.*—an increase attributed to unusual slackness of trade, increased price of provisions, and greater number and cost of pauper lunatics. The rate per cent. on the annual value of real property, as returned in 1856, was 5*l.* 7*s.* 7*d.* in the year 1855-56, but had risen to 7*l.* 7*s.* 6*d.* in the year 1867-68, or to 6*l.* 14*s.* per cent. on the annual value of real property as estimated for 1859. The expenditure amounted in 1858-59 to 4*s.* 6½*d.* per head of population, and 5*s.* 7½*d.* in the year 1867-68; but both these statements are rather higher than the truth, as the Board make their calculations on the population enumerated at the next preceding census, and not on the population of the date, as estimated by the Registrar-General. Outdoor relief is still the rule. The average weekly cost per head in the house for food, clothing, fuel, light, and all other necessaries of maintenance, was 3*s.* 3*d.* in the first half of the year 1868; rent 6½*d.*, salaries 8¾*d.*, medical expenses 1¼*d.* In the year 1867-68, in the 790 parishes raising their funds for poor relief by assessment (97 other parishes still adhering to the system of voluntary contributions), sums amounting to 22,030*l.* were derived from church-collections; and of this amount, 10,154*l.* was applied by the Kirk Sessions to the relief of persons requiring assistance. These funds are generally applied, not to persons chargeable to the funds raised by assessment, but in affording aid to persons in temporary difficulties, with a view to prevent them from becoming chargeable to the parish as paupers. The number of lunatic poor relieved in the course of the year 1867-68 was 6994, and the number at the end of the year (the 14th of May) was 5790, an increase of 164 over the previous year; 4311 were in asylums and poorhouses, and 1479 were residing with relatives or other persons in private dwellings. The returns showing the year's receipt and expenditure state 633,128*l.* for relief of the poor on the roll or registered, 29,058*l.* for relief of casual poor, 32,858*l.* for medical relief, 94,452*l.* for management, 5987*l.* for law expenses.

PAUPERISM IN IRELAND.—The report for 1868-69, rendered by the Irish Poor Law Board to "the Lord Lieutenant-General and General-Governor of Ireland," shows that in the year ending with February, 1869, the average daily number in the workhouses was 53,757, an increase of 740 over the average of the preceding year; the more recent weeks, however, show a considerable decrease as compared with the preceding series, amounting in March, 1869, to 5 per cent. The average daily number receiving outdoor relief in the year, 16,862, shows an increase; but the degree of distress existing at any time in Ireland is to be inferred, not from the numbers in receipt of outdoor relief, but from the numbers receiving indoor relief in the workhouses—the outdoor relief being dependent more on the views of the Boards of Guardians as to the safety and expediency of affording it than on the number of the applicants or the pressure of distress. In the year ending at Michaelmas, 1868, the expenditure for relief of the poor in Ireland from the rates (with the salaries of officers, &c.) amounted to 707,556*l.*, being an increase of 30,780*l.* over the previous year; the number relieved in the year shows an increase of 22,382, the increase being wholly in relief in the workhouse. The average daily number in receipt of indoor relief in the year ending at Michaelmas, 1868, included 2406 able-bodied males, 6133 able-bodied females, 16,024 healthy children, 16,699 sick persons, 12,428 other classes; the whole number, 53,690, amounting to 0·97 per cent. of the population. The average weekly rate of mortality was 4·1 per thousand inmates. The sum paid in outdoor relief is stated at only 44,785*l.* The accounts show 909*l.* repayments from persons relieved by way of loan, and 388*l.* from poor persons under 6 & 7 Vict. c. 92, and 25 & 26 Vict. c. 83. The poor-rate includes expenses under the Medical Charities Act, the Burial Grounds Act, Sanitary Acts, Registration Acts, &c.; and the total expenditure reached, 847,995*l.*, being 23,546*l.* more than in 1866-67, and 1*s.* 3½*d.* in the pound on the annual value of the property rated, which was 13,117,769*l.* Ten years before the poundage of the expenditure was only 11*d.* The increase has been owing to various causes; the principal element is the higher price of food and other necessaries, and there is also greater liberality in the supplies, and a greater proportion of persons are admitted in sickness. The expenditure under the Medical Charities Act amounted in the year to 121,983*l.*; 584,604 dispensary tickets were issued, and 183,155 visiting tickets. The Commissioners have authorised the ap-

pointment of a further number of skilled midwives, and there are now 125 authorised in all. Complaint is renewed of the injustice of the law which makes the Irish relieved in Great Britain removeable to Ireland, but does not allow Englishmen and Scotchmen becoming chargeable in Ireland to be removed to England or Scotland.

POOR-RATE IN [ENGLAND AND WALES.—The return for the year ending at Ladyday, 1868, shows that the gross estimated rental of the property in England and Wales assessed to the poor-rate in the year was returned as 118,334,081*l.*, the net annual value 100,612,734*l.* The amount levied as poor-rates was 11,054,513*l.*, being 1*s.* 10·4*d.* in the pound on the gross estimated rental, 2*s.* 2·4*d.* on the net annual value. These ratios are larger than in the preceding year by 1·5*d.* and 1·9*d.* respectively. About one-third, however, of the sum levied as poor-rates is expended for purposes unconnected with relief to the poor—chiefly for county, borough, or police rate, payments to highway boards, and registration and vaccination fees. The sum expended in relief to the poor in England and Wales in the year was 7,498,059*l.*, being 1*s.* 3·2*d.* in the pound on the gross estimated rental, 1*s.* 5·9*d.* on the net annual value, 6*s.* 11½*d.* per head on the estimated population. This shows an expenditure on relief to the poor exceeding that of the previous year by 538,220*l.*, or 7·7 per cent.; the ratio per pound on the gross estimated rental showing an increase of 1·2*d.*, and on the net annual value 1·4*d.*—the rate per head on the estimated population rising from 6*s.* 6½*d.* to 6*s.* 11½*d.* The expenditure on relief to the poor in the several divisions of England and Wales was as follows in the respective years ending at Ladyday, 1867 and 1868:—In the metropolis, 1,175,363*l.* in 1866-67, and 1,316,759*l.* in 1867-68; in the south-eastern division, 821,560*l.* and 893,455*l.*; in the south-midland, 579,696*l.* and 621,358*l.*; in the eastern, 532,741*l.* and 580,234*l.*; in the south-western, 688,362*l.* and 725,831*l.*; in the west-midland, 724,221*l.* and 769,529*l.*; in the north-midland, 402,163*l.* and 429,525*l.*; in the north-western, 772,706*l.* and 824,405*l.*; in Yorkshire, 483,854*l.* and 515,700*l.*; in the northern division, 302,661*l.* and 319,195*l.*; in the Welsh, 476,512*l.* and 502,067*l.* The increase in the expenditure for relief to the poor in the year was as follows, by counties:—In Middlesex—metropolitan 13·4 per cent., extra-metropolitan 9 per cent.; in Surrey—metropolitan 8·4, extra-metropolitan 12·1; Kent—metropolitan 7·4, extra-metropolitan 7·1; Sussex, 13·3; Stafford, 11·4; Suffolk, 10·9; Essex, 10·1; York—East Riding 9·7, West Riding 6·5, North Riding 3·9; Leicester, 9·4; Worcester, 9; Northampton, 8·6; Hertford, 8·4; Durham, 8·1; Oxford, 7·4; Bedford, 7·3; Nottingham, 7·2; Lancaster, 7·1; Cornwall and Somerset, 7; Bucks, 6·8; Derby, 6·4; Norfolk, 6·3; Hereford and South Wales, 6·2; Hants and Wilts, 5·8; Lincoln, 5·5; Monmouth, 5·2; Berks and Rutland, 5; Cambridge and Northumberland, 4·8; Dorset, 4·7; Westmoreland, 4·6; North Wales and Chester, 4·3; Salop, 3·7; Devon and Gloucester, 3·4; Warwick, 3·2; Cumberland, 0·6; and Huntingdon, only 0·4 per cent.

MEDICAL RELIEF OF THE POOR IN ENGLAND.—A Parliamentary return shows the expenditure out of the poor-rates for medical relief in England and Wales in the 31 years, 1837-68. In the year 1837-38 (the year ending at Ladyday, 1838), the amount was 136,775*l.*; in the year 1847-48 it was 197,954*l.*; in 1857-58, 230,597*l.*; in 1867-68, 272,341*l.* The expenditure under the Public Vaccination Acts was 21,965*l.* in the year 1847-48, 40,761*l.* in 1857-58, and 50,987*l.* in 1867-68. The expenditure for vaccination in 1867-68 was 23·6 per cent. more than in 1856-57; and the remuneration paid to Poor Law medical officers in 1867-68 (253,620*l.*) was 18·7 per cent. more than in 1857-58—the increase in the extra medical fees being 25·2 per cent., or from 36,386*l.* to 45,563*l.*

RELIEF OF THE POOR IN IRELAND.—A Parliamentary return shows that in the year ending at Michaelmas, 1868, the total expenditure in Ireland under the Poor Law, including medical charities and vaccination, and charges under the Registration Acts, amounted to 841,286*l.*—viz., in Ulster, 178,804*l.*; in Munster, 278,382*l.*; in Leinster, 278,511*l.*; and in Connaught, 96,589*l.* The rateable property is valued at 13,117,847*l.*—viz., 3,956,228*l.* in Ulster, 3,330,710*l.* in Munster, 4,479,893*l.* in Leinster, and 1,351,016*l.* in Connaught. The totals of the numbers relieved in the year (not the numbers in receipt of relief at any one time) were 71,073 in Ulster, 107,719 in Munster, 134,536 in Leinster, 28,794 in Connaught, making together 342,122—viz., 289,530 indoor, and 52,592 outdoor. The expenditure in inmaintenance, including clothing, was 437,087*l.*; in outdoor relief, 44,851*l.* The expenditure under the Poor Law varied greatly in different places. In some electoral divisions it was below 5*d.* in the pound on the valuation; in Camus, Oughterard, it was 5*s.* 8½*d.* The poundage under union rating was below 7*d.* in the union of Armagh; it was 3*s.* 4*d.* in the union of Belmullet. In the union of Oughterard the expenditure was 2157*l.* on a valuation of 14,935*l.* The population of Ireland, the mean of the twelvemonth, is estimated at about 5,538,500.

VAGRANTS IN ENGLAND.—The number of vagrants receiving relief under the Poor Law in England and Wales on the 1st of July, 1868, as shown by the return just issued by the Poor Law Board, was 7946; on the 1st of July, 1867, it was only 5248. The following statement shows at both dates the number of vagrants relieved in each of the eleven divisions of England:—In the metropolis (with a population of 2,802,367 at the Census of 1861) the number of vagrants relieved on the 1st of July, 1867, was 1573, and on the 1st of July, 1868, 2085; south-eastern division (with 1,805,534 population

in 1861) the numbers were 443 in 1867, and 927 in 1868; south-midland (1,295,152), 280 and 493; eastern (1,142,230), 103 and 160; south-western (1,883,074), 122 and 187; west-midland (2,434,614), 589 and 917; north-midland (1,287,972), 139 and 275; north-western (2,923,487), 740 and 1023; Yorkshire (1,899,233), 484 and 871; northern division (1,151,332), 413 and 571; Welsh (1,311,109), 362 and 437. Certain parishes make no return, but they contain less than 1 per cent. of the population.

VAGRANTS IN SCOTLAND.—The Report of Her Majesty's Inspector of Constabulary in Scotland for the year ending the 15th of March, 1869, states that the number of vagrants reported by the constabulary during the year was 68,036, an increase of 5962 over the number in the previous year, which also showed an increase of 12,702 over its predecessor. The report appears, however, to be of cases of vagrancy rather than of vagrants. The numbers reported are 33,696 men, 20,756 women, and 13,584 children; and the inspector remarks that, "taking the number of children at one-third of the number of cases reported, which is as near the truth as can be estimated, there are 4528 juvenile vagabonds, with little or no education, brought up as professional mendicants and tramps." In England and Wales an account is taken in April in every police district simultaneously, and the number is found to be about 32,000 or 33,000; but it does not appear that this course is pursued in Scotland. The inspector states that the county police enter in their diaries as vagrants, "tinkers, gipsies, muggers, unlicensed hawkers, and all persons who live by begging, or have no apparent profession, calling, or means of supporting themselves;" and the reduction of the number reported to one-third is described, in the report for 1867-68, as made because "some of the vagrants are reported by several constables in the same county."

INCREASE OF PAUPERISM.—A Parliamentary return shows, in small compass, the increase of pauperism in England and Wales in the last ten years. Taking the average number of persons receiving relief from the rates to be approximately shown by the mean of the numbers on the 1st of July and the 1st of January, there was an increase of 14·69 per cent. in the year ending at Lady-day, 1868, as compared with the year ending at Ladyday, 1859—being considerably more than the increase of population: the numbers are 865,446 in the former, and 992,640 in the latter year. The indoor paupers (wholly supported) increased 23·76 per cent.; the outdoor paupers (assisted), 13·22 per cent. The year's expenditure for "relief of the poor only" increased from 5,558,689*l.* to 7,498,059*l.*—an increase of 34·89 per cent. The expenditure has increased much faster than the number of persons relieved. A like return for the metropolis shows that the average number of paupers increased from 68,826, in the year 1858-59, to 144,469 in the year 1867-68—an increase of nearly 110 per cent.—viz., 86·33 per cent. in the number of indoor poor, and 120·91 in outdoor poor. This shows an increase more than seven times as large as that of England taken as a whole. But the increase of expenditure in the metropolis on poor relief was not so much as double the increase for England as a whole, being from 814,646*l.* to 1,316,759*l.*, or 61·63 per cent.

7.—CRIME.

CONVICTS IN ENGLAND.—The population of the convict prisons of England, on the 1st of April, 1869, consisted of 6966 males and 1157 females; and there were 552 males at Gibraltar. The number of convicts in prison must increase, owing to the greater length of sentences. The number of male convicts received into convict prisons in England in the year 1868 was 1732; 88 of them were men whose licenses were revoked, and, among the remaining 1644, there were 383 who had been previously sentenced to penal servitude. 283 female convicts were received in the year, 33 being women whose licenses were revoked; and, among the remaining 250, there were 76 who had been previously sentenced to penal servitude. The number both of men and women who had been previously sentenced to penal servitude was fewer than in 1867. The earnings of convicts in the year—the value of their labour—shows the following averages: Males—tailors, 7¼*d.* a day; shoemakers, 9*d.*; weavers, 8¼*d.*; matmakers, 8*d.*; oakum-pickers, 1¼*d.*; females—needlewomen, 3*d.*; knitters, 1¾*d.*; washers, 11*d.* The employment of male convicts on large public works for which they are adapted is much more remunerative. At Chatham, they were employed in brickmaking, &c., and earned, in 1868, 2*s.* 7¼*d.* a day; at Portland, quarrying and dressing stone, &c., 2*s.* 3¼*d.*; at Portsmouth, brickmaking, excavating, &c., 2*s.* 2¼*d.*; at Dartmoor, reclaiming land, farm-labour, &c., 1*s.* 3*d.*; at Woking, building new female prison, &c., 2*s.* 7¼*d.* At the three prisons—Portland, Portsmouth, and Chatham—the labour of the prisoners was valued, by measurement, at 124,500*l.*, and the cost of the prisoners was but 116,870*l.*—leaving a profit of 7,630*l.* From 1850 to December 1867, these three prisons have cost 1,686,472*l.*, and have earned 1,386,936*l.*—leaving a net cost of 299,536*l.* for maintaining an average of 2766 prisoners for 17 years.

DISCHARGED CONVICTS.—A Parliamentary return was moved for, ordered, and issued in the session of 1869, stating the number of "convicts discharged from, or retained in, convict prisons in or to this country" in the years 1865, 1866, 1867, and 1868; and the totals for the four years are given as

follows:—On Royal pardon, 28; on commutation of sentence, 11; on medical grounds, 9; on completion of sentence, 676; on license, 5317. In the four years one life-sentence was remitted within five years from its commencement, and one within ten years; 28 within 15 years, 7 within 20 years, none above 20 years, from the commencement of a life-sentence. The four years supply 25 "life-sentences in convict prisons now of 5 years' standing," 17 of 10 years, two of 15 years, and one (1868) of 20 years' standing. The discharges on license are distinguished in the return as those before and those after the periods fixed by the circulars of June 1857 and August 1864. Military convicts are not included in this account.

CRIME IN THE ARMY.—The Royal Commission on Courts-Martial issued, in 1869, returns for the years 1865, 1866, and 1867, showing the amount of crime in the army. The number of soldiers tried by courts-martial on charges of habitual drunkenness, or drunkenness on duty, was 8656 in 1865, 10,857 in 1866, and 10,823 in 1867. Since 1866 the charge for habitual drunkenness has been made imperative on the commission of the fourth offence. The trials for insubordination were 6·4 per 1000 of strength in 1865, 6·1 in 1866, 6·0 in 1867, but 7·4 in 1868. In some of our military prisons the punishment now inflicted is reported by the Commissioners to be quite inadequate to the repression of the crime of insubordination, and some central military prison is needed in which stricter discipline can be exercised than is possible in some of the present places of confinement. The returns, so far as they are complete, show that in 1865 198,048 men were imprisoned by sentence of courts-martial for an aggregate of 1,144,745 days; in 1866, 190,919 men for 1,121,757 days; in 1867, 189,781 men for 1,134,058 days. It is to be hoped this serious loss of service may be lessened by stricter prison-discipline and the new system of fines for drunkenness. 601 soldiers were flogged in 1865, 510 in 1866, 150 in 1867. In 1865, 1562 soldiers were marked with the letter D, 74 with B C, and 106 were discharged with ignominy; in 1866 the numbers were 1464, 120, and 122 respectively; in 1867, 1615, 190, and 184.

CRIME IN IRELAND.—Ireland continues to show a remarkable decrease in the number of persons in prison for crime. The commitments to county and borough gaols (exclusive of debtors) were 60,455 in 1854, but had fallen to 33,999 in 1858, and were only 29,501 in 1868. The number of individuals committed in 1868 was 20,413—namely, 13,992 males and 6421 females; a decrease, as compared with the previous year, of 10 per cent. on the males, and 3·3 per cent. on the females; 12,476 were committed for the first time. The average daily number of prisoners in the county and borough gaols (exclusive of debtors), which eighteen years ago was upwards of 10,000, had fallen to 5700 in 1854, to 2894 in 1858, and in 1868 was but 2131—viz., 1460 males and 671 females. On the 1st of January, 1869, it was 2024. Commitments under the suspension of the Habeas Corpus Act are not included in these statements, as it is thought desirable so to shape the returns that the state of crime throughout a series of years may be compared without disturbance by any abnormal state of legislation. Of the 6421 females committed to Irish county and borough gaols in 1868, more than half were known to have been in prison before; of the 13,992 males not quite one-third. The great number of recommitments of females is a blot upon the prisons of Ireland. But their offences are not of the class characterised as grave crimes, but chiefly loitering in the streets, and similar offences against public order. The number of persons convicted by juries before the judges at assizes, or the chairmen of quarter sessions, in 1868, was 1394 males and 392 females—a decrease, as compared with 1867, of 283 males and 56 females; and 12,954 males and 11,462 females were committed under summary convictions, an increase of 417 males and 545 females. No sentence of death was passed in Ireland in 1868. The sentences to penal servitude, or for long periods of imprisonment, were much fewer than in the preceding year; 86 per cent. of the sentences to imprisonment in county and borough gaols were for terms not exceeding a month. The summary commitments in 1868 to county and borough gaols for drunkenness comprised 3547 males and 3487 females; besides which, 7034 drunkards were imprisoned in bridewells, 5297 males and 1737 females. The total number of persons confined in bridewells in 1868 was 14,137; in 1854, 48,356; and in 1858, 27,424. It will be observed that the average number of prisoners in all the county and borough gaols of Ireland in 1868 was not greater than might have been confined in one gaol for each sex. There is a very great waste of public money in keeping up thirty-nine gaols for 2000 prisoners. The average number in some was under 20. The year's cost of every prisoner lodged in the county gaol at Trim was nearly 84*l.*; in seven gaols the average cost was 60*l.* or upwards. Occasionally the officers outnumber the prisoners in a gaol. The total expense of county and borough gaols in Ireland in 1868 was 83,703*l.*, which was reduced to 81,258*l.* by profit from the sale of work. The expenditure on bridewells is stated at 6523*l.* Many of them are very insecure.

INDUSTRIAL SCHOOLS IN GREAT BRITAIN.—Since the passing of the first Industrial Schools Act in 1857, and down to the end of 1868, 9231 children were committed to these schools in Great Britain—6665 boys and 2566 girls. Of the whole number, 3282 have been discharged. About two-thirds of these—viz., 2111—have been placed in employment, or sent to sea, or enabled to emigrate or enlist; 173 died; 230 have been committed to reformatories; 391 have been specially discharged as diseased, imbecile, illegally committed, or incorrigible; 333 absconded, and were not recovered. The

accounts of character show that in the three years 1865–67 there were 1294 discharged, and 33 deaths leave 1261 to be accounted for; of this number 686, or rather more than half, are reported as known to be doing well, but 5·5 per cent. are known to have been convicted of crime, 5·6 per cent. to be of doubtful character, and 34·4 per cent. have passed beyond the managers' inquiry, and are wholly unknown. The large number "unknown" does not speak favourably for care and interest bestowed upon the supervision of the children after they have left. Mr. Sydney Turner, the inspector appointed to visit the schools, remarks that, considering the large amount of public money now devoted to the maintenance of the schools, and the important bearing which their operations will have on any system of compulsory education for those who will not or cannot train their children themselves, it is impossible that the public can be satisfied with returns which, as to more than 40 per cent. of the children received into an industrial school, leave it wholly uncertain whether it has done any good.

DRUNKENNESS.—So far as the annual police returns of England and Wales indicate, they present the following statements concerning drunkenness—that is, under circumstances of the vice becoming an offence against law:—In the year 1864-65, the year ending at Michaelmas 1865, 105,310 persons were proceeded against summarily before magistrates for drunkenness, or for being drunk and disorderly; in the year 1865–66, 104,368 persons; in the year 1867–68, as many as 111,465 persons—viz., 84,283 men and 29,182 women, about three men to one woman. No explanation is given in this return of so great an increase in the charges of drunkenness in 1868. In many parts of the kingdom the number decreased; the increase was in certain places. In Birmingham the number of charges rose from 1330, in the year 1866–67, to 2310 in 1867–68; in Salford from 455 to 637; in Stockport from 616 to 893; in Hull from 779 to 963; in Bolton from 729 to 1217; in Liverpool from 11,932 to 14,451; in the metropolitan police district from 16,608 to 18,872. In some counties (exclusive of the large towns) there was also a very large increase in the number of cases brought before the magistrates—in Durham, from 1292 to 1561; in Salop, from 1096 to 1432; in Staffordshire, from 3100 to 3544; in Worcestershire, from 477 to 683; in Essex, from 172 to 284; in Gloucestershire, from 417 to 652. The number of persons convicted on these charges is not shown in detail for each place; but the totals for England and Wales were 59,071 men and 15,217 women in the year 1866–67, and 65,095 men and 18,302 women in 1867–68.

CORONERS' INQUESTS.—The number of inquests held in England and Wales has shown little variation from year to year of late. For the five years 1864–68 it ranged between 24,600 and about 25,000; in 1868 it was 24,774. The inquests of 1868 were held upon 17,476 male persons and 7298 females. 6796 of these persons were not more than 7 years old; 1791 were children above 7 but not 16 years old; 11,802 were persons between 16 and 60; 4052 aged persons above 60; and there were 333 whose ages are not specified. Nearly a fourth of the children under 7 years of age were illegitimate; but, according to the Registrar-General's returns, only 1 in 16 or 17 of the children born in England and Wales is illegitimate. The contrast between the two numbers tells its own story, or, if that be not enough, we may take a lower age: inquests were held in 1868 upon 3902 infants not more than a year old, and 1153 of them were illegitimate—nearer 1 in 3 than 1 in 4. The verdicts of coroners' juries at the inquests of 1868 were as follows:—In 261 cases, murder; in 235, manslaughter; in 3, justifiable homicide; in 1546, suicide; in 11,033, accidental death; in 157, injuries from causes unknown; in 2824, found dead; in 320, excessive drinking; in 110, disease aggravated by neglect; in 191, want, cold, exposure, &c.; in 8094, death from other natural causes. The number of verdicts of murder exceeds the number of murders reported by the police, because in many instances the jury on the trial reduced the crime to manslaughter or concealment of birth, and the police return conforms to the decision of that jury. The number of coroners' inquests' verdicts of murders in England and Wales was 221 in 1862, 270 in 1863, 246 in 1864, 227 in 1865, 272 in 1866, 255 in 1867, 261 in 1868; and it is a startling fact that about two-thirds, sometimes more, are cases of infanticide. In 1863, 166 of the verdicts of murder were on inquests upon infants not more than a year old; in 1864, 203; in 1865, 175; in 1866, 166; in 1867, 149; in 1868, 166. It is not uncommon that half of these verdicts, but in 1868 only 43 per cent., are given in the county of Middlesex. It is difficult, however, to discern how far our criminal returns represent the state of crime, and how far they are affected by more or less strictness in the administration of the law. Practically, the punishment for child-murder, as our law stands, is two years' imprisonment for concealment of birth. The number of verdicts of suicide in England and Wales averaged 1306 a year from 1856 to 1862; was 1385 in 1863, 1337 in 1864, 1397 in 1865, 1360 in 1866, 1356 in 1867, but rose suddenly to 1546 in 1868. Suicide is nearly three times as frequent among men as it is among women; in 1868 the number of suicides was 1138 males and 408 females. There are in England and Wales more than 300 places for which coroners are appointed; in 1868 there were 75 in none of which were so many as 10 inquests held.

8.—Public Health.

Ratio of Mortality in our Cities.—The rate of mortality in 14 great cities and towns in the year 1868, as shown by the mean of the rates for the four quarters of the year, was as follows:—In London (that is to say, the entire metropolitan district), 23·57 per thousand of the estimated population; Liverpool, 29·22 per thousand; Manchester, 32·01, and Salford, 30·72 per thousand; Birmingham, 23·94; Leeds, 27·91; Sheffield, 26·63; Bristol, 22·83; Bradford, 26·46; Newcastle-upon-Tyne, 25·54; Hull, 24·38. The city or borough boundaries of the provincial towns are the limits here taken. The mortality of the city of Edinburgh in 1868 was at the rate of 26·87 per thousand; of Glasgow, 30·42; of Dublin (the city and some suburbs), 24·67. The death-rate in all England in 1868 was 22·20 per thousand—namely, 24·22 in the districts comprising the chief towns, and 19·40 in the smaller towns and country parishes. The death-rate of the United Kingdom was 22·16 per thousand.

Chances of Death by Different Diseases.—Taking the English population in the aggregate, the chance that among the various forms of death the fate which a human being must encounter will be accidental, or from injury wilfully inflicted, is nearly as 1 to 29; the chance that death will be by zymotic disease is as 1 to 6; and the chance that it will be by consumption is nearly as 1 to 9. But, of course, the risk is increased to some, and therefore lessened to others, according to occupation, sex, age, and other circumstances. The following results, showing the proportional number of deaths in England in 1867 from each cause to 1,000,000 deaths from all causes, arranged in the order of their fatality, will enable the chances of death by different diseases to be determined in the above manner:—From consumption, 118,003; bronchitis, 86,554; atrophy and debility, 69,284; old age, 61,414; convulsions, 56,294; heart-disease, 46,499; pneumonia, 45,275; diarrhœa, 42,558; typhus, 36,150; scarlatina, 26,370; whooping-cough, 25,454; paralysis, 23,175; apoplexy, 22,309; premature birth, 19,272; cancer, 18,320; dropsy, 15,211; hydrocephalus, 15,095; tabes mesenterica, 14,754; fracture and contusions (accident), 14,141; measles, 14,124; brain disease, 12,158; liver disease, 11,859; lung disease, 10,270; croup, 9405; teeth, 9219; cephalitis, 9047; asthma, 8035; sudden death, cause unascertained, 7516; stomach disease, 6320; scrofula, 6299; kidney disease, 6260; enteritis, 6127; drowning (accident), 5737; burns and scalds (accident), 5574; diphtheria, 5574; smallpox, 5388; childbirth, 5029; epilepsy, 4957; rheumatism, 4837; nephria, 4723; syphilis, 3641; joint disease, 3584; peritonitis, 3368; jaundice, 3201; erysipelas, 3109; want of breast-milk, 3080; suffocation (accident), 2899; mortification, 2849; hepatitis, 2828; laryngitis, 2755; ileus, 2528; thrush, 2493; accident not specified, 2393; uterus disease, 2291; metria, 2285; dysentery, 2062; ulceration of intestines, 1990; hernia, 1987; cholera, 1977; pleurisy, 1854; gastritis, 1591; ascites, 1552; diabetes, 1458; insanity, 1372; influenza, 1301; pericarditis, 1269; malformations, 1081; aneurism, 1078; hanging (suicide), 1046; cyanosis, 1031; purpura and scurvy, 1010; ulcer, 950; nephritis, 948; phlegmon, 922; murder and manslaughter, 840; spina bifida, 832; cystitis, 817; gout, 808; intemperance, 802; delirium tremens, 791; skin, 776; violent deaths not specified, 641; introsusception, 635; poison (accident), 602; stricture of intestines, 596; cut or stab (suicide), 575; ovarian dropsy, 530; carbuncle, 504; drowning (suicide), 489; stone, 431; quinsy, 431; stricture of urethra, 422; noma, 373; worms, 369; suicide (means not stated), 300; poison (suicide), 289; gunshot (accident), 266; ague, 259; pavamenia, 247; privation, 234; ischuria, 227; zymotic diseases not specified, 225; cut or stab (accident), 221; fistula, 214; spleen, 199; remittent fever, 184; arthritis, 161; gunshot (suicide), 122; chorea 107; pancreas disease, 39; hanging (execution), 24; hydrophobia, 21; glanders, 9. Out of every 1000 deaths, 195 were caused by zymotic diseases, 192 by constitutional diseases, 402 by local diseases, 167 by developmental diseases, and 36 by accidental and other violence.

Vaccination in England.—In the year ending at Michaelmas, 1868, 518,794 persons were vaccinated in England and Wales by the public vaccinators, 513,042 successfully. This last number is equal to two-thirds of the number of births in the year. 385,635 were children under one year old; 127,407 were above one year old. This statement does not include vaccinations in private practice, and it is to be remembered that many of the children born died before the time for their vaccination had arrived.

Insanity in England.—The number of persons of unsound mind in England and Wales who came under the official cognisance of the Commissioners in Lunacy was 53,177 on the 1st of January, 1869, exclusive of 225 persons found lunatic by inquisition, and residing with those who have been appointed committees of their persons; 6224 were private patients, and 46,953 were paupers. This return shows an increase of 2177, as compared with the 1st of January, 1868; an increase of 122 in the private patients, of 2020 in the paupers, and of 35 in the criminal lunatics in Broadmoor Asylum. On the 1st of January, 1859, the total number was only 36,762. The increase in the ten years has been 16,415—viz., 15,114 in the paupers, 840 in the private patients, and 461 at Broadmoor. The proportion of recorded lunatics to the population would thus seem to have risen from 1 in 536, on the 1st of January, 1859, to 1 in 411 on the 1st of

January, 1869, an increase of 45 per cent., while the population is estimated to have increased rather more than 11 per cent.; 67 per cent. of the increase is attributable to additional pauper patients in county and borough asylums. The number of such patients appears to have increased 70 per cent., of lunatics in workhouses 40 per cent., and of outdoor pauper lunatics 21 per cent. The increase of private patients during the same period appears to have been altogether 17 per cent. It must be remembered that all this time cases formerly left unnoticed were being detected, registered, and brought under treatment, and the longevity of the entire body of the inmates of asylums increased by improved sanitary and other regulations. The distribution of the insane in England, on the 1st of January, 1869, was as follows:—In county and borough asylums, 26,867; in registered hospitals and licensed houses, 7148; in naval and military hospitals, 209; in the criminal asylum, 461; private single patients, 324; in workhouses, 11,181; outdoor paupers, 6987. Of every 100 pauper lunatics, about 61 were in asylums, hospitals, and licensed houses; 24 were in workhouses, and 15 with their relatives or others.

Insanity in Scotland.—The annual report of the Commissioners in Lunacy for Scotland states that on the 1st of January, 1868, the number of insane persons in Scotland, exclusive of unreported lunatics maintained in private dwellings from private sources, was 7,055, of whom only 1241 were maintained from private sources; 3293 were males, and 3762 females. The number of lunatics officially known to the Board had increased by 1182 in ten years. Of the lunatic patients in asylums there are 73 pauper to 27 private patients. The families of most of this latter class of lunatics have a strong pecuniary inducement to remove them from the asylum as soon as all hope of recovery is past, or the malady has assumed a manageable form; but in the case of pauper lunatics, the family and the inspector of the poor being relieved of all trouble and responsibility so long as the patient remains in the asylum, there is a considerable inducement to leave him there. The Commissioners say that the result is that the burdens of the ratepayers are heavily increased by the unnecessary detention of many patients in expensively-conducted establishments, and that the consequences of this state of matters are every day assuming an aspect of greater gravity. They point out, that as in England, so in Scotland, the increase of lunatics is among the pauper class; and they repeat the statement they made last year, that insanity is essentially a disease, not of the overstrained intellectual or emotional faculties, but of a depraved bodily condition. They consider that we must look for the prevention of insanity, or the arrest of its progress, to education and the introduction of physiological instruction into schools, so that the prevailing ignorance of hygienic laws may give place to such an education as will qualify a man to be the guardian of his own health.

9.—Education.

Public Education in Great Britain.—The return ordered in the session of 1869, by the House of Lords, on the motion of Lord Russell, shows that in the last ten years, sums amounting to 6,070,135*l.* have been expended upon public education in England and Wales, out of moneys voted by Parliament and in connexion therewith, 8,991,405*l.* being obtained from other sources; of this latter sum, 4,554,333*l.* came from subscriptions, and 3,241,326*l.* from school-pence. In Scotland, in the ten years, the expenditure upon public education, out of moneys voted by Parliament, has amounted to 1,012,452*l.*, and in connection therewith 1,426,466*l.* from other sources: 501,660*l.* of it from subscriptions, and 667,685*l.* from school-pence. Of the expenditure in England and Wales, 2,650,102*l.* went in building and administration, and in Scotland 234,621*l.*

Public Education in Ireland.—The report for the year 1868 on National Education in Ireland states, that at the close of the year the Board had 6586 schools in operation, an increase of 66 as compared with the preceding year; and the total number of children whose names appeared on the school rolls within the year was 967,563, an increase of 54,365. This number, however, includes many children who never actually attended on any day of the year; the number actually attending, in 1868, was 918,344. The average daily attendance was 354,853, an increase of 33,170—116,100 in Ulster, 108,134 in Munster, 78,480 in Leinster, 52,139 in Connaught. The estimated population in Ireland in the middle of the year was 5,543,285. Of 967,444, nearly the whole number of pupils on the rolls of the national schools in 1868, 80·93 per cent. were Roman Catholics; 11·10 per cent. Presbyterians; 7·27 per cent. belonging to the Established Church; 0·70 per cent. belonging to other denominations. In unmixed schools, under Roman Catholic teachers, there were 384,672 Roman Catholic pupils on the rolls, and in schools under Protestant teachers, there were 24,182 children on the rolls, of whom 5700 were Roman Catholics. In mixed schools, there were on the rolls, 119,817 Protestant pupils mixed with 30,895 Roman Catholics, in schools taught exclusively by Protestant teachers; 354,764 Roman Catholics mixed with 26,046 Protestants, in schools taught exclusively by Roman Catholic teachers; and 14,415 Protestants mixing with 12,327 Roman Catholics, in schools taught conjointly by Protestant and Roman Catholic teachers. Returns showing the literary proficiency of 729,462 of the pupils on the rolls for the last quarter of the

year 1868, give 43·6 per cent. in the first book, 33·1 per cent. in the second book, 16·5 per cent. in the third book, and 6·8 per cent. in the fourth and higher books. The Board had in their service, at the end of the year 1868, 6171 principal teachers, 2079 assistant teachers, and 370 junior literary and industrial assistants; making in the whole 8620, of whom 3457 are trained. Of the salaries and emoluments of the teaching staff, the large proportion of 83·3 per cent. came from funds provided by the State; the local emoluments (children's pence, subscriptions, &c.), received in aid of teachers' salaries, in 1868, averaged only 3*s.* 4*d.* per pupil. There were 124 school-farms in 1868.

EDUCATIONAL GRANTS.—The expenditure from Parliamentary grants for primary schools in Great Britain, in the year 1868, was 757,495*l.*:—viz., for building, enlarging, repairing, and furnishing elementary schools, 34,463*l.*; for augmenting salaries of certificated schoolmasters and schoolmistresses, 32,692*l.*; for paying salaries of assistant and probationary teachers, 3835*l.*; for paying stipends of pupil-teachers and gratuities for their special instruction, 39,320*l.*; annual grants to training colleges, 72,045*l.*; grants to reformatory, night, and industrial schools, 596*l.*; for inspection, 56,354*l.*; for administration (office in London), 21,531*l.*; miscellaneous, 5828*l.*; grants under the Revised Code for examination and attendance of scholars, 490,831*l.* In 1867 the total amount expended from Parliamentary grants was 682,201*l.*, showing an increase in 1868 of 75,294*l.*

A LIST OF GRANTS.—The following schools in England each received, in 1868, more than 200*l.* from the Committee of Council of Education:—Greyfriars Church School, Reading, 204*l.*; Priory Girls' and Infants' National School, Birkenhead, 291*l.*; St. Lawrence's Roman Catholic School, Birkenhead, 245*l.*; St. Peter's Church National School, Birkenhead, 218*l.*; St. Mary's National School, Chester, 220*l.*; Crewe National School, 346*l.*; Wesleyan School, Portwood, 232*l.*; Runcorn National School, 217*l.*; Stockport National School, 232*l.*; Stockport Roman Catholic School, 344*l.*; St. Catherine's National School, Tranmere, 313*l.*; Truro British School, 208*l.*; Christ's Church National School, Carlisle, 223*l.*; Holy Trinity National School, Whitehaven, 206*l.*; Claycross Ironworks School, 341*l.*; Holy Trinity National School, Derby, 227*l.*; Boys', Girls', and Infants' National School, Ripley, 255*l.*; and Royal Naval and Military Free School, Devonport, 304*l.*

ENDOWED SCHOOLS.—The volumes containing reports on grammar-schools, and digests of information respecting them, compiled by the Schools Inquiry Commission, over which Lord Taunton presided, are making their appearance one by one. Vol. 14, which was issued in the summer of 1869, relates to the south-western division of England, comprising the counties of Wilts, Dorset, Somerset, Devon, and Cornwall. Of the population of this division, 1,836,736 (since increased), 1 218,893 are classed as rural; the others are in 74 towns, four with more than 20,000 inhabitants, 32 with 20,000 to 5000 people, and 38 towns with less than 5000 people. The net annual endowment of grammar-schools is estimated at 7760*l.*, besides 2870*l.* for exhibitions, making a total of 10,630*l.* Marlborough College was included in the inquiry made by the "Nine Schools Commission:" excluding that school, the endowments embrace 24 classical schools, with 1184 scholars; 10 semi-classical, with 446 scholars; 14 non-classical, with 600 scholars. The income of six is paid over to parish schools, and of two to private schools; one is united to the Taunton Proprietary College School; and seven are in abeyance. The total number of scholars is 2252. Of the 24 classical schools, which have, including exhibitions, 7600*l.* a year, six only (with 518 scholars) are entitled, by the age of their scholars, to rank in the first grade. There are endowments for exhibitions amounting to 1030*l.* a year, which belong to this division, but are not attached to any particular school. There are only two endowed schools for the secondary instruction of girls; the sum of their incomes amounts to 450*l.* a year. The aggregate net income of the endowments for secondary education in this division may be set down at over 12,000*l.* a year. There are also at least 180 endowments for the primary instruction of the poor, applying to education a net annual sum of 6053*l.* Among these are Bruton Hospital, with a gross income of 930*l.*; Hayward's School, at Crediton, 530*l.*; the Blue School at Exeter, above 1000*l.*; the workhouse school at Plymouth, 528*l.*; and Lady Hannah Rogers' School, also at Plymouth, 845*l.*

EDUCATION AMONG FACTORY OPERATIVES.—Mr. Daniel Walker, Assistant Inspector of Factories, in submitting his report for the year 1868 to the Home Office, gives some educational statistics respecting young persons employed in factories. From these it appears, that of 700 young persons examined in various establishments in Edinburgh and Glasgow, and at Dundee, Newcastle-on-Tyne, Leeds, Rochdale, and Blackburn, 373 can read and write, 100 can only read, and 227 can neither read nor write. An equal number were examined at each city and town, and it was found that Leeds furnished the largest proportion of readers and writers, Edinburgh of those who can only read, and Newcastle-on-Tyne of those who can neither read nor write. These statistics also show, that as to trades the most ignorant class in Edinburgh appear to be those engaged in tobacco manufactories; in Glasgow, those employed in the pottery trade; at Dundee, those in flax and jute spinning and weaving; at Newcastle-on-Tyne, those in the potteries and tobacco manufactories; at Leeds, those in iron rolling mills; at Rochdale, the cotton spinners and weavers; and at Blackburn, those employed in metal trades.

CIRCULATION OF THE BIBLE.—From a return made in 1869 by the British and Foreign Bible Society, it appears that by means of that agency there have been distributed, up to the 31st of March, 1869, 57,210,485 copies of the Holy Scriptures, the expenditure incurred during the 65 years of the society's existence having been 6,553,464*l.* 4*s.* 3*d.* The Bible has been translated by the society into nearly all the languages of the world.

10.—SOCIAL ECONOMY.

FRIENDLY SOCIETIES.—A Parliamentary return, issued in the session of 1869, shows that 463 friendly societies in England and Wales have deposited their rules with the registrar under the Act of 1855, which provides that if a friendly society, established for any purpose which is not illegal, whose rules have not been certified by the registrar, shall deposit a copy of its rules with him, all disputes shall be decided in a manner directed by such rules without appeal; the rules to be enforced in the county court, or, if they contain no directions, application may be made in the first instance to the county court; and summary proceedings may be taken before justices, against any member or other person withholding or misapplying the property of the society. Of the 463 societies, more than two-thirds are in four counties—namely, 137 in Lancashire, 112 in Yorkshire, 40 in Middlesex, 26 in Nottinghamshire.

SAVINGS BANKS.—The effect of the establishment of Post-office savings-banks in reducing the deposits in the older (the trustee) savings-banks has been very marked in England and Wales, but not so in the other parts of the United Kingdom. Taking the year 1860, the year before the introduction of Post-office savings-banks, and comparing it with 1868, adding also the returns for 1867, to show the latest statement of the tendency in savings-bank business, there appear the following results:—At the end of the savings-banks' year, the 20th of November, 1860, there were 1,360,355 accounts open at the trustee savings-banks in England and Wales, in 1867 only 1,144,984, and in 1868 only 1,118,138; in Scotland, there were 139,114 in 1860, and the number increased to 168,120 in 1867, and to 176,970 in 1868; in Ireland, there were 69,294 in 1860, only 53,006 in 1867, but 56,702 in 1868; in the Channel Islands, 17,015 in 1860, 19,672 in 1867, 20,034 in 1868. The amount due to the depositors was as follows:—In England and Wales, in 1860, 36,252,164*l.*; which amount had fallen, in 1867, to 31,493,363*l.*, and in 1868 to 31,371,154*l.* In Scotland, the deposits amounted to 2,414,241*l.* in 1860, and had risen to 2,949,901*l.* in 1867, and to 3,219,008*l.* in 1868. In Ireland, they were 2,143,284*l.* in 1860, only 1,633,015*l.* in 1867, but 1,813,985*l.* in 1868; in the Channel Islands, 449,456*l.* in 1860, 457,737*l.* in 1867, and 464,120*l.* in 1868. The totals for the United Kingdom are these:—In 1860, 1,585,778 accounts open at the (trustee) savings-banks, the amount of deposits being 41,259,145*l.*; in 1867, 1,385,782 accounts open, the deposits being, 36,534,016*l.*; in 1868, 1,371,844 accounts open, the deposits being 36,868,267*l.* In round numbers, the deposits in England almost approach 30*s.* per head of population; in Scotland, they are about 20*s.* per head; in Ireland, about a third of 20*s.*; in the United Kingdom, as a whole, about 24*s.* The Post-office Report states the amount of deposits in Post-office banks for the whole United Kingdom—namely, about 7*s.* 8*d.* per head of population.

LIFE ASSURANCES.—A Parliamentary return, moved for by Mr. Barnett, in the session of 1869, shows the number of stamps issued in each of the six years, 1863-68, for policies of life-assurance. The number for small sums has enormously increased in that period. In the year 1868, stamps were issued for 464,352 policies—no less than 396,296 of them bearing only a 3*d.* stamp, which is for policies for sums not exceeding 25*l.* The large stamps issued in the year were very few—one of 7*l.*, three of 7*l.* 10*s.*, two of 9*l.* 10*s.*, one of 16*l.* 10*s.*, one of 17*l.* 10*s.* The life-assurance stamps of the year produced 16,787*l.* for the public purse.

GOVERNMENT INSURANCES AND ANNUITIES.—A Parliamentary return on this subject, published in the session of 1869, shows that, according to the accounts of the National Debt Office, the sums received during the year 1868, on account of deferred life annuities, amounted to 4979*l.*, and the receipts on contracts to 4206*l.*; that 59 new contracts were entered into during the year, representing a total of 1152*l.*, and that the total number of all current contracts at the end of the year was 228, representing a total of 4703*l.* The sums received on account of payments on death amounted to 4725*l.* (including a balance of 243*l.* from December, 1867), and the receipts on contracts to 4192*l.* Eleven payments, amounting to 734*l.*, were made during the year; 350 new contracts were entered into, representing 26,781*l.*; the total number of all contracts at the end of the year being 1719, representing 134,823*l.* sterling.

FUNDHOLDERS AND RAILWAY SHAREHOLDERS.—An examination of the list of persons receiving dividends on stock in the public funds, and of proprietors of the London & North-Western Railway Company, shows the following results:—As many as 34·19 per cent. of the fundholders receive a half-yearly dividend not exceeding 5*l.*, but only 11·18 per cent. of the railway shareholders; 15·53 per cent. of the former, but only 8·93 per cent. of the latter, receive half-yearly dividends more than 5*l.*, but not exceeding 10*l.*; 33·23 per cent. and 37·67 per

cent. respectively receive half-yearly dividends between 10*l.* and 50*l.*; between 50*l.* and 100*l.*, 8·94 and 18·70 per cent. respectively; between 100*l.* and 200*l.*, 5·01 and 12·09 per cent.; between 200*l.* and 300*l.*, 1·40 and 4·35 per cent.; between 300*l.* and 500*l.*, 0·94 and 3·80 per cent.; between 500*l.* and 1000*l.*, 0·49 and 2·25 per cent.; between 1000*l.* and 2000*l.*, 0·18 and 0·71 per cent.; exceeding 2000*l.*, 0·09 and 0·32 per cent. The list of East Indian Railway shareholders, having the guarantee of the Government of India, shows a much larger proportion of small holders than in the London & North-Western: the persons receiving half-yearly dividends not exceeding 50*l.* are 83 per cent. of the whole number of fundholders, and 79 per cent. of East Indian Railway proprietors, but less than 58 per cent. of London & North-Western holders. On the other hand, the large holders form a much greater proportion in the London & North-Western Railway Company than among the fundholders, or the East Indian Railway shareholders. Only 0·35 per cent. of the East Indian Railway proprietors receive half-yearly dividends exceeding 500*l.*, and only 0·76 per cent. of the fundholders, but 3·28 per cent. of the London & North-Western shareholders. Only 0·11 per cent. (15 persons) receive half-yearly dividends exceeding 1000*l.* on East Indian Railway shares, and only 0·27 per cent. (623 persons) of the fundholders, but 1·03 per cent. (231 persons) of the London & North-Western shareholders. That railway has been selected for this calculation as being the most prominent of our railways popular as investments. In round numbers, the fundholders are 231,000, the North-Western shareholders 22,500, the East Indian 13,000; and the capitals on which these calculations have been made are 690 millions sterling, 37 millions, and 22 millions respectively.

11.—Emigration.

Emigration from the United Kingdom.—The Emigration Commissioners have to state, in their report on the year 1868, that since 1863 the real emigration from the United Kingdom has been rapidly falling off, and that its apparent magnitude has been kept up by the increasing number of foreigners who emigrate through the United Kingdom—Germans, Swedes, Danes, &c., who land at Hull, and proceed by railroad to Liverpool to embark for America. In 1863 these foreigners formed only 3 per cent. of the whole emigration from the United Kingdom; but their numbers have ever since been increasing, until, in 1868, they amounted to more than 26 per cent. Another striking feature in emigration is the large decrease in the number of Irish emigrants. It has declined from 116,391 in 1863 to 64,965 in 1868—a decrease chiefly due probably to the gradual improvement in the condition of the people. The emigration from the United Kingdom in 1868 amounted to 196,325—58,268 English, 14,954 Scotch, 64,965 Irish, 51,956 foreigners, 6182 of nativity not distinguished; 119,254 were males, 77,071 females; 155,532 went to the United States, 21,062 to British North America, 2915 to Central and South America, 12,809 to Australian colonies, 1538 to the West Indies, 636 to India and the Straits Settlements, 130 to China, 612 to the Cape, 492 to Natal, 69 to Mexico, and 529 to other parts.

Emigration from Ireland.—In the year 1868, 62,190 emigrants left the Irish ports—a decrease of 19,534, compared with 1867; 36,181 were males—a decrease of 9680; 26,009 were females—a decrease of 9854. The ages of 99 per cent. were ascertained:—0·5 per cent. were under 1 year old; 3·9 per cent. were 1 and under 5; 7·6 per cent. 5 and under 15; 47·7 per cent. 15 and under 25; 29·2 per cent. 25 and under 35; 6·2 per cent. 35 and under 45; 2·9 per cent. 45 and under 55; 0·9 per cent. 55 and under 65; 0·1 per cent. 65 and upwards. In 1867 the number who were 5 and under 15 constituted 9·1 per cent. of the whole; 15 and under 25, 49·1 per cent.; 25 and under 35, only 24·4 per cent. So far as the emigration from each province is distinguished, the departures from Connaught (9692) were nearly as many as in 1867; but from Ulster there went, in 1868, only 14,763 persons—3400 fewer than in 1867; from Leinster only 10,154, being 5873 fewer; from Munster, 16,857, being 8411 fewer than in 1867.

Occupations of Emigrants.—Of the 196,325 emigrants from the United Kingdom in 1868, 94,766 are distinguished in the list as males above 12 years of age; 49,255 are described, generally, as "labourers;" the next largest number is that of the miners and quarrymen, who were 8500; 7258 were farmers; 7171 gentlemen, professional men, merchants, &c.; 2553 carpenters and joiners; 1261 agricultural labourers, gardeners, carters, &c.; 951 tailors; 790 clerks; 712 smiths, besides 165 blacksmiths, 31 silversmiths, and six locksmiths; 772 were bricklayers, masons, plasterers, slaters, &c.; 444 engineers; 419 shopkeepers, shopmen, warehousemen, &c.; 412 domestic servants; 384 boot and shoe makers; 381 spinners and weavers; 333 painters, paperhangers, plumbers, and glaziers; 289 coalminers; 278 seamen; 271 braziers, tinsmiths, whitesmiths, &c.; 229 bakers, confectioners, &c.; 115 coopers; 111 printers; 104 butchers, poulterers, &c. Various other trades have their representatives in the list, but none of them are described as sending forth so many as a hundred in 1868. Of the 57,014 females above 12 years old, 23,517 are not described: other 23,598 are described as married women; 8592 were domestic or farm-servants; 868 gentlewomen and governesses; 335 milliners, dressmakers, or needlewomen; and 13 shopwomen. Of the

38,417 children under 12, 8096 were infants not a year old. The age of 6128 emigrants is not stated.

GOVERNMENT EMIGRATION.—The following are the details of the emigration to the Australian colonies, Natal, and the Falkland Islands, conducted by Her Majesty's Emigration Commissioners, at the expense of colonial and public funds, during the year 1868. The number of ships chartered by the Commissioners was ten; one of these sailed to New South Wales, six to Victoria, two to Western Australia, and one to Natal. The emigrants to the Falkland Islands were conveyed in a private vessel. The number conveyed to the colony of New South Wales amounted to 520 souls, equal to 481¼ statute adults, of whom 20 were married men, 24 married women, 187 single men, 217 single women, 36 boys between the ages of 1 and 12, 31 girls between the same ages, and five infants (four male, one female); 104 were English, 56 Scotch, 358 Irish, and 2 foreigners. The number of emigrants conveyed to Victoria was 2787 souls, equal to 2504 statute adults, of whom 217 were married men, 217 married women, 698 single men, 1133 single women, 227 boys between the ages of 1 and 12, 251 girls between the same ages, 23 male infants, and 21 female; 1142 were English, 186 Scotch, 1453 Irish, and 6 foreigners. The number of emigrants conveyed to Western Australia was 140 souls, equal to 133 statute adults, of whom 13 were married men, 13 married women, 7 single men, 96 single women, 5 boys between the ages of 1 and 12, 3 girls between the same ages, 1 male and 2 female infants; 28 were English, and 112 Irish. To Natal 132 souls, equal to 122 statute adults, were conveyed, of whom 15 were married men, 16 married women, 70 single men, 12 single women, 8 boys between the ages of 1 and 12, 10 girls between the same ages, and 1 female infant; 56 were English, 44 Scotch, and 32 Irish. To the Falkland Islands, 11 souls, equal to 10 statute adults, were conveyed,—viz., 1 married man, 1 married woman, 5 single men, 3 single women, and 1 female infant; 2 were English and 9 Scotch. The total amounts to 3590 souls, equal to 3,250⅔ statute adults, of whom 266 were married men, 271 married women, 967 single men, 1461 single women, 276 boys between the ages of 1 and 12, 295 girls between the same ages, 28 male and 26 female infants; 1332 were English, 295 Scotch, 1,955 Irish, and 8 foreigners.

EMIGRATION TO AUSTRALASIA.—According to official returns laid before Parliament in the session of 1869, the number of persons who emigrated to the Australian colonies and New Zealand during the year 1868 amounted to 12,809, distributed as follows:—To New South Wales, 1318; Queensland, 685; Victoria, 6566; South Australia, 351; Western Australia, 168; Tasmania, 18; and New Zealand, 3703. This is a decrease compared with 1863 of no less than 40,245; the numbers who left the United Kingdom for these colonies in each of the five years, 1863-7, were 53,054, 40,942, 37,283, 24,097, and 14,466 respectively. The emigration in 1868 was the smallest since 1847. Emigration by means of colonial funds was confined last year almost entirely to persons nominated in passage-warrants by the Colonial Government of Victoria, and to single women selected by the Emigration Commissioners. New South Wales does not at present promote emigration by means of public funds. The Legislature of South Australia passed a vote in 1868 for the purpose of immigration, but no emigrants were selected for passages to Adelaide last year. To Western Australia 140 emigrants, of whom 109 were adult females, were sent out by means of the moneys voted by Parliament. To Queensland the emigration was renewed in the autumn of last year, by which passages, on payment of about half the cost, were granted to married couples and single men, and free passages to single women. The assisted emigration to New Zealand in 1868 was confined to the provinces of Auckland, Wellington, Canterbury, and Otago, and the numbers despatched were 1301. Of the 12,809 persons who emigrated to the Australian colonies and New Zealand last year, 11,705 embarked at English ports, and 1104 at Scotch ports—viz, from London, 5746, of whom 589 were married men, 711 married women, 2351 single men, 1176 single women, 403 boys between the ages of 1 and 12, 378 girls between the same ages, 63 male infants, and 75 female; 4256 were English, 461 Scotch, 768 Irish, and 261 foreigners. From Liverpool 2749 embarked, of whom 228 were married men, 255 married women, 1222 single men, 569 single women, 195 boys between the ages of 1 and 12, and 210 girls between the same ages, 25 male infants, and 34 female; 1155 were English, 325 Scotch, 1073 Irish, and 185 foreigners. From Plymouth 1450 embarked, of whom 247 were married men, 268 married women, 817 single men, 1062 single women, 206 boys between the ages of 1 and 12, and 215 girls between the same ages, 25 male infants, and 25 female; 1450 were English, 173 Scotch, 1232 Irish, and 10 foreigners. From Glasgow, 1102 embarked, out of which number 741 were single adults—viz., 445 males and 296 females; 1029 of the emigrants from this port were Scotch. Of the 12,809 persons who emigrated to the Australian colonies and New Zealand in 1868, 1224 were married men, 1367 married women, 4985 single men, 3147 single women, 902 boys between the ages of 1 and 12, 899 girls between the same ages, 127 male infants, and 147 female; 7201 were English, 1990 Scotch, 3141 Irish, and 462 foreigners.

CHRONICLE OF EVENTS AND OCCURRENCES,

HOME AND FOREIGN.

From November, 1868, *to November*, 1869.*

1868.

Nov. 11. Proclamation in the *London Gazette* for dissolving the present Parliament, and ordering the writs for a new one to be returnable on the 10th of December.
16. Numerous borough and city nominations throughout England.
17. Election riot at Cambridge, with loss of life.
19. Bank of England rate of discount fixed at 2½ per cent., after remaining for sixteen months at 2 per cent.
20. Presentation to the Queen of Mr. Anson Burlingame, ambassador of the Emperor of China.
24. Defeat of Mr. Gladstone in the election of South-west Lancashire.
25. Wreck of the *Hibernia* steamer, 700 miles off the Irish coast, with loss of above fifty lives.
26. Colliery explosion at Hindley Green, Wigan, resulting in the death of sixty-one men.
28. Mrs. Disraeli elevated to the peerage, under the title of Viscountess Beaconsfield of Beaconsfield.

Dec. 1. Opening of the new Metropolitan Meat and Poultry Market at Smithfield, London.
2. Resignation of the Ministry of Mr. Disraeli.
3. Bank of England rate of discount raised from 2½ to 3 per cent.
4. Mr. Gladstone summoned to Windsor Castle to have an interview with the Queen.
4. Dr. Tait, Bishop of London, elected Archbishop of Canterbury.
5. Donation by Mr. Peabody of a further sum of 100,000*l.* to the London poor, in addition to 250,000*l.* given previously.
7. Severe gale in and around London, and numerous casualties on the river.
9. Mr. Gladstone sworn into office as First Lord of the Treasury.
10. Opening of the first session of the eighth Parliament of Queen Victoria by royal commission.
10. Sir William Page Wood, the newly-appointed Lord Chancellor, is created Baron Hatherley, of Down Hatherley.
15. New writs issued for the election of the members of the Government having seats in the House of Commons, and adjournment of the House for two weeks.
20. Landing of Lord Mayo, Governor-General of India, at Bombay.
21. Re-election of Mr. Gladstone as member for Greenwich, and of Mr. John Bright as member for Birmingham.
24. The Marquis of Bute received into the Roman Catholic Church at Nice.
26. Severe gale and loss of life in the English Channel.
29. Reassembling of Parliament, and further adjournment to February 16, 1869.

It appears from the quarterly report of the Registrar-General, that the natural increase of the people of the United Kingdom, the births in excess of deaths, was at the rate of 1177 daily, or 410,000 a year in 1868. Emigration, however, carried off 391 daily, or 142,000 a year, leaving 268,000 as the final addition to the population.

* To add to the completeness of the *Chronicle of Occurrences*, as a succinct historical record of the principal events of the year, the *Chronicle of the Session of Parliament*, formerly given separately in the *Companion*, has been incorporated with it. The net result of the Parliamentary Session is, moreover, exhibited in pages 206–47, where the dates are given of all the stages of the Bills that became Acts.

1869.

Jan. 1. Charge of conspiracy brought before the Lord Mayor at the Mansion House against six of the directors of Overend, Gurney, & Co.

2. Insurrection at Malaga, quelled by the troops, with a loss of above 400 lives.

3. Trial, at the Court of Queen's Bench, of the case of Miss Saurin, Irish Catholic, against Mrs. Star, superioress of the convent of Hull, for illtreatment and libel.

6. Capture of Fort Ngatapa, New Zealand, headquarters of the Maories, under the chieftain Te Kooti.

6. Meeting of a diplomatic conference at Paris, to settle disputes between Turkey and Greece.

12. Landing of the Earl of Mayo, new Governor-General of India, at Calcutta.

14. Convention for the settlement of the Alabama claims signed at London by the Hon. Reverdy Johnson, United States' Plenipotentiary, and the Earl of Clarendon, Secretary of State for Foreign Affairs.

15. Temporary abolition of the octroi duties upon grain in India, to meet the famine existing in many parts.

18. At a chapter of the Knights of the Order of the Black Eagle, at Berlin, the Prince of Wales receives the chain of the order formerly worn by the Prince Consort.

19. Earthquake in India. "A correspondent, writing from Silchar" (says the *Times*), "states that the whole station was destroyed. The ground rose twenty feet, and the river changed its course. The earth opened in many places, emitting blue sand and water."

21. Arrival of the Prince and Princess of Wales at Vienna. "Their Royal Highnesses were received by the Emperor at the railway-station, whence they proceeded to the Imperial Palace."

24. A Protestant religious service performed for the first time in public at Madrid.

25. The civil governor of Burgos assassinated by fanatics, "urged on by a mob of priests," when on the point of proceeding, according to the orders of the Government, to make an inventory of the books, jewels, and objects of art contained in the cathedral.

25. The Rev. W. K. Macrorie consecrated a bishop of the province of Capetown, at Capetown.

26. Calamitous railway accident at the Bhore Ghaut, Western India, the train dashing into an embankment, breaking up five carriages. Eighteen natives killed and thirty-six wounded.

27. Six of the directors of the firm of Overend, Gurney, & Co., London, committed for trial by the Lord Mayor.

30. Great earthquake in the state of Santander, Bogota, South America. "Fears were entertained," says a *Times* correspondent, "of the whole cordillera breaking up and descending in large masses of rock."

Feb. 3. Arrival of the Prince and Princess of Wales at Alexandria.

4. Enthronisation of Dr. Tait as Archbishop of Canterbury in Canterbury Cathedral.

4. Fatal hunting accident near Ripley, Yorkshire; Sir Charles Slingsby and three others drowned.

7. Shocks of earthquake felt at Florence.

9. Severe gale in the English Channel, and collision between the "Calcutta," of 2000 tons burden, with 270 miles of telegraph cable for the Persian Gulf, with a Prussian bark, the "Emma," sixteen miles off the Lizard. Eight men of the "Calcutta," including the captain, drowned.

Feb. 11. Opening of the Spanish Constituent Cortes at Madrid. "An immense crowd assembled, and troops of the garrison and the national guard lined the approaches to the palace of the Cortes."

12. Burning of the steamer "Nellie Stevens" on the Red River, Arkansas: sixty-three lives lost.

16. Opening of the first session of the Reformed Parliament of the United Kingdom by royal commission. It is announced in the speech from the throne that "the ecclesiastical arrangements of Ireland will be brought under consideration at a very early date, and the legislation which will be necessary in order to their final adjustment will make the largest demands upon the wisdom of Parliament."

18. Visit of the Prince and Princess of Wales to the ruins of the temples of Karnak, Egypt.

19. Committal for trial of two directors of the Merchants' Company, established in October, 1865, on a charge of fraud.

20. Blowing-up of the Austrian frigate "Radetzki," between the islands of Lissa and Lesina, in the Adriatic: 341 lives lost.

22. Decision by the judges of the Court of Appeal at Naples, permitting the marriage of priests.

23. Meeting of the two Houses of Convocation of Canterbury.

24. Consecration of the Bishop of Lincoln, and the colonial bishops of Mauritius and Grafton & Armidale, at Westminster Abbey.

26. Birth of a son to Princess Christian of Schleswig-Holstein.

30. Arrival of the Duke of Edinburgh at Adelaide, Australia.

March 1. The Bill for the disestablishment of the Irish Church read a first time by the House of Commons.

2. Total destruction by fire of the General Post Office, Bombay.

4. Inauguration of General Grant as President of the United States. In his inaugural address he says that he commences his duties perfectly untrammelled; that he will veto Bills when he believes it to be necessary; that he will have a policy to recommend, but none to enforce against the people's will. He strongly supports payment of the United States' debt in gold, and the early resumption of specie payments.

11. First stone laid of the new piers for the extension of Portsmouth Harbour, "the commencement of a great engineering work that will cost us a fabulous sum."

13. Closing of the royal dockyard and shipbuilding establishment at Deptford.

15. Slight shocks of earthquake felt, at 6·15 p.m., in various parts of East Lancashire and West Yorkshire.

17. Twenty-sixth boat-race between the universities of Oxford and Cambridge, Oxford winning for the ninth time in succession.

18. Partial opening of the Suez Canal, by the admittance of the waters of the Mediterranean into the Bitter Lakes.

18. Debate on the Irish Church Bill in the House of Commons, in which Mr. Disraeli exclaims: "I hold that the connection between Church and State is really a guarantee for religious liberty and toleration, and that it maintains the standard of religious liberty and toleration just as much as we by other means sustain the standard of value. If you wish to break up the State, destroy and disturb the country, you can never adopt a more effectual method for the purpose than by destroying the standards of value and of toleration."

23. Second reading of the Irish Church Bill carried in the House of Commons, by 368 against 250 votes.

25. Arrival of the Prince and Princess of Wales at Suez, and inspection of the Suez Canal works.

27. Meeting at Umballa between the Governor-General of India

and the Ameer of Afghanistan. "The Earl of Mayo welcomed the Ameer, Shere Ali, in the name of the Queen, and expressed a hope that the interview would be the commencement of a new era of mutual confidence."

March 28. Fifty Spaniards receive the communion at Madrid according to the Protestant rite. "This is the first time that this ceremony has been celebrated since the time of Philip II."

31. Disastrous colliery explosion, causing the death of 22 persons, at Highbrooks, near Wigan, Lancashire. "A more unfortunate colliery than the Highbrooks does not exist in the neighbourhood," says a correspondent from Wigan. "It stands about a mile from the highroad from Ashton to Wigan, at the top of a single line of railway that runs from the central offices. It was here, in 1865, that over 100 colliers were imprisoned several days by the breakage of the machinery, and here also, in 1866, an explosion occurred by which 30 persons lost their lives."

April 1. Bank of England rate of discount raised from 3 to 4 per cent.

1. Arrival of the Prince and Princess of Wales at Constantinople.

4. The introduction of Bibles "printed in foreign languages" permitted in Spain, by decree of the Provisional Government.

6. Great entertainment given by the Sultan to the Prince of Wales, followed by a visit of the Princess to "the ladies of the Harem."

8. Enthronisation of Dr. Jackson as Bishop of London in St. Paul's Cathedral.

8. The budget estimates for 1869-70 submitted to the House of Commons by the Chancellor of the Exchequer.

9. Acceptance by the Hudson's Bay Company of the government proposal to cede all their territorial rights to the Dominion of Canada, on payment of 300,000*l.* compensation.

10. Great strike of colliers and engineers at Seraing, near Liege, Belgium; fatal collision between the men and the troops.

12. Letter of the Emperor Napoleon III. to the Minister of State, declaring his intention to bestow pensions upon the veterans of the First Empire. "On the 15th of August," his Majesty writes, "a hundred years will have elapsed since the Emperor Napoleon I. was born. During that long period many ruins have been accumulated, but the grand figure of Napoleon has remained upstanding. It is that which still guides and protects us; it is that which, out of nothing, has made me what I am."

13. Rejection by the Senate of the United States of the Alabama Claims treaty, only one vote being given in its favour.

14. Appointment of the Hon. Mr. John Lothrop Motley as United States' Minister to Great Britain.

15. A motion to prevent the Irish Church Bill from going into Committee of the House of Commons defeated by 355 against 229 votes.

16. Passing of the second clause of the Irish Church Bill by 344 against 221 votes.

17. Departure of the Prince and Princess of Wales from Constantinople, after a flying visit to the Crimea.

20. Wreck and burning of the steamer "Uselda," on the Missouri river; 54 lives lost.

21. Fearful accident at the Delabole slate-quarries, Camelford, Cornwall, 16 persons being buried by the fall of poppet-heads. "The quarries form one immense pit, having an area of sixteen acres, and the depth in some parts is as much as 370 feet. Then there is an additional 100 feet to the top of the slate rubble-heaps surrounding the quarries. The slate

and refuse are raised from the bottom by drawing-engines connected with frameworks, called 'poppet-heads,' which overhang the pit."

April 27. Speech of the Mayor of Cork, glorifying "that noble Irishman O'Farrell," who attempted to kill the Duke of Edinburgh in New South Wales.

28. Riots at Londonderry, on the occasion of a visit of Prince Arthur to the city; eight persons killed.

28. Opening of Columbia Market, Bethnal-green, built by Miss Coutts, at a cost of 200,000*l.*—"a market the like of which, for lavish decoration and almost extravagant adornment of interior, does not exist in the world."

30. An accusation of Fenianism brought against the President of the Board of Trade in the House of Commons by Lord Claud Hamilton, member for Tyrone, who says that "the encouragement shown to the Fenians [by the President] has induced the Fenian assassins to conceive that they had a friend in the Government in the person of the right hon. gentleman."

May 1. Londonderry proclaimed, under the Peace Preservation Act.

4. Discovery at Barcelona of a conspiracy for restoring the Bourbons to the throne of Spain.

5. A Bill brought into the House of Commons by the Attorney-General for Ireland, to remove the Mayor of Cork, for having "so misconducted himself as to bring the administration of the law into disrepute and contempt," through "uttering language of a seditious and scandalous character."

6. Bank of England rate of discount raised from 4 to 4½ per cent.

9. Return of the Prince and Princess of Wales to England, from their journey to the East.

11. Resignation of the Mayor of Cork, and withdrawal of the Bill against him in the House of Commons.

13. In the Spanish Constituent Cortes, an amendment of Señor Orense, proposing the establishment of a Confederate Republic, is rejected by 182 against 64 votes.

14. Election riots at Paris; several persons killed, and above 200 taken to prison.

15. Arrival at London of a telegram from New York of the same day, announcing that "the Pacific Railway was completed this afternoon, at half-past 2 o'clock."

21. Article 33 of the Spanish Constitution, establishing monarchy, adopted in the Cortes by 214 against 71 votes.

24. Wreck of the Aberdeen ships "Margaret" and "Zetur," off Anticosti Island, North America, with loss of all hands, except one.

25. Return of the French ironclad corvette "Belliqueuse" to Brest, from a voyage round the world—"the first vessel of this description which performed so long a voyage."

26. Ninetieth Derby stakes in the Epsom races won by the horse "Pretender."

27. Proclamation of the result of the elections at the Hôtel-de-Ville, Paris; the majority of the deputies returned to the legislative body being republicans and "irreconcilables."

31. Third reading of the Irish Church Bill in the House of Commons, assented to by 361 against 247 votes, the debate being wound up by a speech of the First Lord of the Treasury, concluding: "The Church may have much to regret in respect to temporal splendour, yet the day is to come when it will be said of her, as of the Temple of Jerusalem, that 'The glory of the latter house is greater than that of the former;' and when the most loyal and faithful of her children will learn not to forget that at length the Parliament of England took

courage, and the Irish Church was disestablished and disendowed."

June 1. Meeting of a Protestant Conference, attended by about 1000 delegates, at Worms, in Germany, to issue a declaration against "the supposition expressed in the Papal letter of the 13th of September, 1868, that Protestants would return to unity with the Catholic Church."

2. Proposal for reducing the Spanish army defeated in the Constituent Cortes, on the demand of General Henrique O'Donnell. "After the termination of his speech O'Donnell was seized with apoplexy, and removed to the president's private room, where he died."

4. Fatal riots at Mold, Flintshire; four persons killed by the troops.

7. New elections at Paris, resulting in the return of one liberal and three republicans.

8. Sir Samuel Baker, having conferred upon him the command of an expedition for the suppression of slavery on the Upper Nile, receives the title of Pacha from the Sultan.

10. Bank of England rate of discount lowered from 4½ to 4 per cent.

10. Disastrous colliery explosion at Ferndale, Glamorganshire. "The colliery, one of the most important in South Wales, is owned by Messrs. David Davis & Sons, the steam-colliery proprietors in the Aberdale Valley. It is the only pit which taps rich beds of the best South Wales steam-coals yet to be worked. The same colliery, on the 9th of November, 1867, was the scene of the most dreadful colliery accident ever known in South Wales. On that occasion 168 persons lost their lives."

11. Tumultuous riots at Paris; the crowds dispersed, after some resistance, by cavalry.

12. Sailing of the "Great Eastern," with the French Atlantic cable on board, from the Medway. "As she passed through the fleet at Sheerness, the sides of the ships were black with crews, who swarmed out like bees to see the 'Great Eastern.' As she came silently down, towering over even the largest line-of-battle ships, and dwarfing by comparison the great ironclads to mere sloops, her size, her strength, her speed seemed almost overwhelming, and her whole appearance magnificent beyond the power of words to tell."

14. Commencement of the debate for the second reading of the Irish Church Bill in the House of Lords. "Never was the House more densely crowded by an excited and highly intelligent audience."

14. A Regency adopted for Spain, by a vote of 193 against 45 in the Constituent Cortes.

15. Continuation of the debate on the Irish Church Bill in the House of Lords. "You intend to pacify the Irish peasant," exclaims the Bishop of Peterborough," by refusing him the land which he does want, and giving him the destruction of the Church which he does not want; and his answer is one which, I grieve to say, English statesmen in times past have taught the Irish peasant to give. The Irish peasant has been taught that murder and outrage are a necessary stimulant to the consciences of English statesmen. . . . He says he will be satisfied with nothing less than possession of this land, which I do Her Majesty's Government the justice of believing that they have no intention whatever of bestowing upon him."

17. In the continued debate on the Irish Church Bill in the Upper House, the Earl of Derby, concluding a lengthened speech, cries: "My lords, I am now an old man, and, like many of your lordships, I have already passed threescore years and

ten. My official life is entirely closed; my political life is nearly so; and, in the course of nature, my natural life cannot now be long. That natural life commenced with the bloody suppression of a formidable rebellion in Ireland, which immediately preceded the Union between the two countries. And may God grant that its close may not witness a renewal of the one and the dissolution of the other!"

June 18. Second reading of the Irish Church Bill agreed to in the House of Lords, by 179 against 146 votes. "The Archbishops of Canterbury and York did not vote, retiring behind the bar."

18. Field-Marshal Don Francisco Serrano y Dominguez inaugurated Regent of Spain.

22. Arrival of the Khedive of Egypt in England.

23. Decision of the Supreme Court of Georgia, that "the intermarriage of whites and negroes is illegal, null, and void."

24. Bank of England rate of discount lowered from 4 to 3½ per cent.

30. Explosion of two carts full of nitro-glycerine near Cwymglo, Carnarvon. "The horses drawing the carts and three men were blown to atoms, and fragments of the cartwheels were thrown to a great distance. In the village, nearly a quarter of a mile away, great injury was done, and at the spot where the carts were, two round holes, 6 feet deep and 7 feet in diameter, were made in the grouud. The railway-station, forty yards off, was blown to pieces. The whole valley, to the foot of Snowdon, suffered a tremendous shock."

July 2. Riots at Portadown, Belfast; two "Orangemen" killed by the police.

3. Departure of the Khedive of Egypt from England.

4. Gift by Mr. George Peabody of another million dollars to his American Southern Education Fund, the entire fund being now two millions, and the annual income 130,000 dollars.

7. Inauguration of a new dock at King's Lynn, in presence of the Prince and Princess of Wales.

12. Message of the Emperor Napoleon III. to the Legislative Body, conveying the grant of extended Parliamentary powers. "The message was very coldly received."

14. Protest issued by the Earl of Derby and forty-six other members of the House of Lords against the Irish Church Bill.

14. Condemnation, by verdict of jury, of the Roman Catholic bishop of Linz, Austria, for "uttering subversive doctrines and attempting to disturb public order." The bishop sentenced to three months' imprisonment.

14. Terrible accident on the Erie Railway, to the New York express-train, which was thrown from the track. "The cars caught fire, and seven persons were burnt to death."

15. Reconsideration in the House of Commons of the Irish Church Bill, with the amendments made by the Lords, nearly all of which are struck out.

15. Bank of England rate of discount lowered from 3½ to 3 per cent.

17. Close of the Wimbledon rifle-meeting for 1869 by a volunteer review.

19. Shutting-up of the Thames Tunnel, constructed by Brunel, as a public footway.

22. Compromise entered into between the House of Lords and the Government in the Irish Church Bill.

22. Explosion of "firedamp" in the Haydock collieries, killing 58 persons. "The calamity occurred in the South-west Lancashire coalfield, about eight miles from Wigan. The scene of the accident is the Queen pit of Messrs. Evans & Co.'s collieries at Haydock, where but twenty-nine weeks ago, in the same mine, an explosion occurred, causing about thirty

deaths. Since that casualty the proprietors have made alterations in the mode of working the colliery, with a view of providing the most ample means of ventilation, and protecting in every possible manner the lives of their workmen."

July 23. Unveiling of a statue of Mr. George Peabody, on the pavement of the Royal Exchange, London.

24. Disturbances at Cracow, Austria, caused by the discovery that a nun had been kept in close confinement in the convent for twenty years, and was only liberated by the interference of a judicial commission.

24. Successful laying of the French Atlantic telegraph cable.

25. Arrival of the Pretender Don Carlos on Spanish soil.

26. Royal assent given to the Irish Church Bill.

28. Bill for the abolition of capital punishment defeated in the House of Commons by 118 against 58 votes.

31. Fresh outbreak of hostilities between the colonists and the natives of New Zealand.

Aug. 1. Encounter between the Spanish troops and Carlist insurgents in the mountains of Toledo, the latter being defeated.

2. Draught of a "Senatus Consultum," modifying the Constitution of the Empire in a Liberal sense, laid before the French Senate.

2. Terrible mining accident, by which 200 people lose their lives, at the Burg colliery, in the valley of the Plauenscher Grund, near Dresden, Saxony.

3. Wreck of the mail-steamer "Germania," from New York for Hamburg, in Trepany Bay, Newfoundland.

4. Appropriation Bill passed by the House of Commons.

6. Intimation given to the House of Commons, by the Chancellor of the Exchequer, that he is disposed to reduce the bullion in the sovereign from 123¼ to 122¼ grains, with request to consider the subject during the recess. "Nothing is sacred to the Chancellor of the Exchequer, not even the pound sterling."

8. Opening of a new London park, called Finsbury Park, on the ground formerly occupied by Hornsey Wood.

11. Prorogation of Parliament till the 28th of October.

12. Prorogation of the Houses of Convocation of the Province of Canterbury.

15. Issue of a proclamation of the Emperor Napoleon III., granting a complete amnesty for all political offenders, in order "to celebrate the centenary of Napoleon I. by an act which responds to our feelings."

18. Meeting of the British Association for the Advancement of Science at Exeter.

19. Bank of England rate of discount lowered from 3 to 2½ per cent.

22. Arrival and public reception of Prince Arthur at Halifax, Nova Scotia.

24. Despatch of a body of 6000 troops from Spain to Cuba, to suppress the insurrection in that island.

26. Prosecution, by order of the Provisional Government of Spain, of a number of bishops who have placed themselves in opposition to the civil authorities.

31. Flight of the Pretender Don Carlos from Guipuzcoa, Spain, in a vessel bound for England.

Sept. 1. Speech of Prince Napoleon in the French Senate, recommending reforms. "One can do anything with bayonets, except sit on them."

1. Issue of a manifesto of the Roman Catholic prelates of Ireland, demanding a Catholic University or a National University with a Catholic College, access to University emoluments,

representation in the Senate, a share in the funds devoted to the support of endowed schools, a rearrangement of the Queen's Colleges on a denominational system, and also a settlement of the land question.

Sept. 5. Serious illness of the Emperor Napoleon III., causing a panic at the Paris Bourse.

6. Burning of the Avondale Colliery, Plymouth, Pennsylvania, resulting in the death of 110 men and boys. "So great a calamity," says a letter from Philadelphia, "has never before occurred in the American mining regions, and the grief and demoralisation it has caused can scarcely be imagined. Work has ceased in all the collieries for miles around."

10. Publication of the new "Senatus Consultum," appendix to the Constitution of the Empire, in the French "Journal Officiel."

13. Visit of King Wilhelm of Prussia to the city of Königsberg; in the crush of the multitude the railings of a bridge give way, resulting in the death of thirty persons.

13. Wreck of the P. & O. Co.'s steamer "Carnatic," on the island of Shadwan, in the Gulf of Suez, and loss of thirty lives, with the Indian mails, cargo, and specie.

14. Meeting of the General Synod of the Church of Ireland at St. Patrick's Cathedral, Dublin.

17. Report from St. Thomas, West Indies, stating that on this day, "at 10 minutes to 3 P.M., without the least warning noise, the island was shaken most violently, for about 15 seconds, by a severe earthquake—as severe, for the time it lasted, as the great one of 3 P.M. of the 18th of November, 1867."

22. Public reception of the Duke of Edinburgh by the Mikado of Japan.

25. Republican insurrection in the city of Barcelona.

26. Vast conflagration of ships in the harbour of Bordeaux, caused by the sudden explosion of a lighter laden with petroleum. "The lighter was lying at anchor in the harbour, near Lormont. The petroleum-casks, wafted by the tide, communicated the fire with frightful rapidity to the vessels moored to the quay. The conflagration lasted the whole night, and between twenty and thirty large vessels were destroyed."

Oct. 1. Closing of the royal dockyard and shipbuilding establishment at Woolwich. "There will be unemployed nearly 700 shipwrights, 40 caulkers, 150 joiners, 20 sailmakers, 40 sawyers, 220 smiths, 20 millwrights, 50 riggers, and about 530 labourers. Woolwich dockyard was the first dockyard built in the kingdom, having been constructed in the reign of Henry VIII."

4. Great damage done by storm and high tides at New Brunswick, to an estimated loss of several million dollars. "Eastport, Maine, was entirely destroyed."

7. Prorogation of Parliament from the 28th October to the 23rd December.

8. Fatal riots and disturbances at St. Aubin, near Toulouse, resulting from the strike of the miners in the district. In an encounter with the troops, fourteen persons were killed and twenty-two wounded.

9. Fatal railway accident, killing seven and maiming thirteen persons, at Long Eaton Junction, near Nottingham, on the Midland Railway. "The mail express from Nottingham ran down an excursion-train from the same place, which excursion-train was there to be run into because its driver had been afraid he must else have run down another excursion-train in front, and this prior excursion-train was there because it had already run down a luggage-train."—*Times.*

Oct. 10. Monster meeting at Dublin, attended by about 100,000 persons, to demand the release of the Fenian prisoners.
11. Insurrection at Valencia, which is taken possession of by the republicans.
12. Meeting of the "National Education League," at Birmingham.
14. Conflagration at Glasgow, and destruction of the Vulcan Oil-works and the Eagle Ironworks.
16. Valencia stormed, after ten hours' bombardment, by an army numbering thirty battalions of infantry and fifty-six pieces of artillery.
18. Letter of the Right Hon. W. E. Gladstone, replying to a memorial for the release of the Fenian prisoners, that "to advise the release of the prisoners would be contrary to our duty as guardians of the public security and peace."
18. Peasant insurrection near Cattaro, Dalmatia, directed against the Austrian law of conscription.
19. Inundation of the Gulf Coalpit, Châtelineau, Belgium; twenty-five colliers drowned.
22. Explosion of "firedamp" in the Macintosh Pit, Newbury, Somerset. "The dead, nine in number, were blown up and down the pit, and into a pool of water, from which they were fished up by a crook."
24. Fatal railway accident at the Welwyn Junction of the Great Northern Railway; four passengers killed.
25. Promulgation, at Havannah, of a decree of the Spanish Government establishing complete religious liberty in Cuba and Porto Rico.
28. Burning of the steamer "Stonewall," on the Mississippi, near Cairo. "Of the 160 passengers and crew on board only 38 were saved."
29. Funeral, at Knowsley, of the Right Hon. Edward Geoffrey Stanley, fourteenth Earl of Derby. "The ceremony was of the simplest possible character, in accordance with the expressed wishes of the late Earl."
31. Severe shocks of earthquake felt at Frankfort-on-the-Main, Wiesbaden, and other towns of Germany.

Nov. 1. Defeat of the insurgents of Cattaro, by the Austrian troops.
3. Bursting of the boiler of the gunboat "Thistle," at Sheerness; eight persons killed.
3. Arrival of the Emperor of Austria at Athens.
4. Rate of discount at the Bank of England raised from 2½ to 3 per cent.
4. Serious illness of the King of Italy.
5. Ministerial crisis in Spain, and resignation of Admiral Topete.
6. Visit of Queen Victoria to the City of London, to inaugurate the opening of new Blackfriars Bridge and the Holborn Viaduct. "The weather was fine, and the streets through which the Royal cortége passed were densely packed with spectators, who cheered the Queen with much enthusiasm as she passed along. Her Majesty, who was accompanied by the Princesses Louise and Beatrice and Prince Leopold, arrived at the Surrey end of Blackfriars Bridge at noon, where she was received by the civic dignitaries, and presented with an address. The bridge having been declared open for traffic, the Royal party passed on to the Viaduct, where a ceremony similar in character was gone through."

NECROLOGICAL TABLE

OF DISTINGUISHED MEN AND WOMEN WHO DIED 1868–69.

			Age.
1868.			
Nov.	27.	LUCAS, Samuel, journalist, editor of "Once a Week," and contributor to the "Times"	51
Dec.	11.	EMPIS, Adolphe Simonis, French dramatist, member of the Académie française	74
	16.	DESNOYERS, Louis, French journalist, founder of the "Charivari" and the "Siècle"	64
	18.	CHAVEAU, Adolphe, French jurist, author of "Théorie du Code Pénal," and other works	67
	20.	ESCAYRAC DE LAUTURE, Joseph, Marquis of, French geographical writer	83
	24.	COOPER, Abraham, painter of "Death of Harold" and other pictures	82
	27.	GOODALL, Edward, engraver of Turner's works	74
	31.	FORBES, James David, author of "Theory of Glaciers," and other works	60
1869.			
Jan.	9.	STRANGFORD, Percy Smythe, Viscount, philologist	44
	10.	HUET, Paul, French landscape painter	65
	15.	ELLIS, Sir Henry, antiquarian, late Principal Librarian of the British Museum	91
	16.	WELD, Charles Richard, author, Librarian of the Royal Society	51
	26.	JONES, Ernest, political and lyrical writer	50
	—	NEWTON, Sir William, Miniature Painter in Ordinary to the Queen	84
	30.	CARLETON, William, Irish novelist, author of "Traits and Stories," and other works	71
	31.	BARNARD, Mrs. Charles, lyrical writer, authoress of poems under the pseudonym of "Claribel"	35
Feb.	3.	KEELEY, Robert, comedian and dramatic writer	75
	13.	MARTINEAU, Robert, landscape painter	43
	14.	BERGENROTH, Georg Heinrich, German historian, explorer of the archives of Siamanca	45
	18.	WEBB, Rev. John, antiquarian, Rector of Tretire, Herefordshire	93
	28.	LAMARTINE, Alphonse Prat de, French poet and historian, author of "Histoire des Girondins"	78
	—	TROPLONG, Raymond Théodore, French jurist, author of "Le Code Civil Expliqué," and other works	73
March	5.	TENNENT, Sir James Emerson, author of "History of Ceylon" and other works	65
	9.	BOILEAU, Sir John Peter, archæologist, for a time Vice-President of the Society of Antiquaries	74
	12.	BERLIOZ, Hector, French musical composer and author	65
	13.	CLAY, Sir William, political economist, author of several works on Banking and Currency	77
	24.	JOMINI, Baron Henri, French military writer, author of "Traité des Opérations Militaires," and other works	90
April	9.	BABER, Rev. Henry Harvey, philologist, author of "Psalterium Græcum ex Cod. M.S. Alexandrino"	93
	18.	OWEN, John James, American philologist, Vice-President of the New York Free Academy	66
	28.	SMITH, Toulmin, author of "English Gilds"	53
May	3.	LEFROY, Thomas, for many years Chief Justice of the Court of Queen's Bench, Ireland	93

		Age.
May	10. DILKE, Sir Charles Wentworth, Bart., author, proprietor of the "Athenæum"	59
	11. JOYCE, Thomas, journalist, formerly editor of the "Morning Chronicle"	43
	15. DYCE, Rev. Alexander, antiquarian writer, and editor of the works of Shakespeare	70
	18. CUNNINGHAM, Peter, author of "Handbook of London," and other works	53
	20. AYRE, Rev. John, philologist and Biblical scholar	70
	27. DURANDO, General Giacomo, Italian journalist, founder of the "Opinione"	62
	30. JEWITT, John Sheldon, engraver and draughtsman	69
June	3. BROUGHTON, John Cam Hobhouse, Lord, poet and historical writer	82
	10. HURLSTONE, Frederick Yeates, painter, President of the Society of British Artists	68
	14. HESSE, Nicolas Auguste, French artist, painter of "L'Adoration des Cergers," and other works	74
	16. STANLEY OF ALDERLEY, Edward John, Lord, statesman and political writer, Postmaster-General 1860-66	67
	18. RAYMOND, Henry Jarvis, American journalist, founder and editor of the "New York Times"	59
	19. GRISAR, Albert, Belgian musical composer, author of "Le Carillonneur de Bruges"	60
	24. GOLTZ, Count Robert Heinrich Von der, German diplomatist and political writer, ambassador of Prussia in France 1863-69	52
	27. A'BECKETT, Sir William, historical writer, author of "The Georgian Era," and other works	63
	28. TODD, Rev. Dr. James Henthorne, Irish archæologist, Librarian of Dublin University	64
	29. GRESWELL, Rev. Edward, theologian, author of "Dissertations on the Gospels," and other works	71
July	1. HUET, François, French philosophical writer, author of "Le Cartésianisme," and many other works	54
	2. BERBRUGGER, Louis Adrien, French philologist and archæologist	68
	3. BARRAULT, Emile, French journalist, fomerly editor of the "Courrier français"	67
	5. BERARD, Jacques Etienne, French chemist, for fifty years professor of chemistry at Montpellier	80
	11. JERDAN, William, author and journalist, for 33 years editor of the "Literary Gazette"	88
	13. GORDON, Lady Duff, authoress, translator of Ranke's "History of Prussia," and other German works	48
	— TAUNTON, Henry Labouchere, Lord, statesman and political economist, President of the Board of Trade, 1839-41 and 1847-52	71
	20. WADDINGTON, Rev. George, theologian, author of "History of the Reformation," and other works	76
	22. WOOD, Edward, author of "Wedding Day in All Ages"	33
	29. JUKES, Joseph Beete, geologist, director of the Geological Survey of Ireland	58
Aug.	1. HAMILTON, Walter Kerr, Bishop of Salisbury, 1854-69	60
	— CRAWFORD, William, painter of "Gamekeeper's Daughter," and other pictures	44
	2. ROEBLING, Johann, American civil engineer, constructor of the Niagara railway-bridge	53
	5. EDEN, Hon. Emily, author of "Portraits of the People and Princes of India," and other works	72

		Age.
Aug.	10. HUBER, Victor, German historian, author of "Die Englischen Universitäten," and other historical writings	69
	11. SELWYN, Sir Charles Jasper, one of the Lords Justices of Appeal, 1867-69	55
	13. NEIL, Adolphe, French Field-marshal, author of "Histoire du Siége de Sébastopol"	67
	20. NORTH, Charles Napier, Colonel, author of "Journal of an English Officer in India"	52
	26. PERSIANI, Giuseppe, Italian composer, author of "Ines de Castro," and other operas	65
	— LEYS, Baron Henri, Belgian artist, painter of "Faust et Marguerite"	54
Sept.	1. YOUNG, Sir Charles George, genealogist, Garter King-of-Arms	74
	4. BEHAN, Thomas, journalist, editor of the "London Gazette"	66
	7. THOMPSON, Thomas Perronet, General, political economist, author of "Corn-law Catechism," and other books and pamphlets	86
	9. WATTS, Thomas, philologist, Keeper of Printed Books in the British Museum	65
	— FESSENDEN, William Pitt, American political economist, for a time Secretary of Treasury of the United States	63
	13. ROGET, Dr. Peter Mark, physician, author of "Thesaurus of English Words and Phrases"	91
	15. CLARK, Rev. William, naturalist, from 1817 to 1866 Professor of Anatomy at Cambridge	88
	17. GRAHAM, Prof. Thomas, Master of the Mint, author of "Elements of Chymistry"	64
	18. PHILLPOTTS, Henry, Bishop of Exeter 1831–69	91
	26. FOGGO, George, painter of "The Entombment of Christ," and other pictures	76
	28. LIBRI, Carrucci Guglielmo, Italian mathematician, author of "Histoire des Sciences Mathématiques en Italie"	66
Oct.	2. WALDEGRAVE, Samuel, Bishop of Carlisle 1860–66	52
	8. PIERCE, Franklin, American jurist, President of the United States from 1852 to 1856	65
	13. SAINTE-BEUVE, Charles Augustin, French poet and journalist, author of "Causeries du Lundi"	65
	14. WOODWARD, Bernard Bolingbroke, librarian to the Queen, and editor of the "Fine Arts Quarterly Review"	53
	— SCHLEICHER, August, German philologist, author of "Die Sprachen Europa's," and other works	48
	20. WALSH, John Edward, Master of the Rolls in Ireland, 1866-69	53
	23. DERBY, Edward Geoffrey Stanley, Earl of, statesman and author, Prime Minister 1852, 1858–59, and 1866–68	70
	23. CONINGTON, John, philologist, Professor of Latin Literature at the University of Oxford, 1854–69	44
	24. HÉBERT, Pierre, French sculptor, author of "Le Fleuve de la Vie," and other works	65
	28. BRUCE, John, historian and archæologist, for a time Vice-President of the Society of Antiquaries	67
	— RAMSAY, Alexander, journalist, sub-editor of the "British Almanac and Companion" from 1830 to 1869	75
	31. WESTMINSTER, Richard Grosvenor, Marquis of, administrator, formerly lord-lieutenant of Cheshire	72
Nov.	4. PEABODY, George, American philanthropist, "the benefactor of the poor"	74
	6. FORCADE, Eugène, French journalist, contributor to the "Revue des Deux-Mondes"	49

INDEX

TO

"THE BRITISH ALMANAC" AND "COMPANION TO THE ALMANAC."

(*The figures in parentheses refer to the pages of the* "BRITISH ALMANAC," *and those not so marked to the separately numbered pages of the* "COMPANION TO THE ALMANAC.")

	PAGE
Abstracts of Acts of Parliament	220
„ Parliamentary and other Official Documents	248
Agriculture, statistics of	260
Ambassadors, foreign, in England	(54)
Architecture and Public Improvements, by J. Thorne	128
Army agents	(67)
Army, general officers of, English	(62)
„ „ „ Indian	(64)
Army and Navy, Parliamentary statutes relating to the	206, 220
Assessed Taxes and Licences, table of	(91)
Australian Industries, by J. Plummer	61
Bank of England, Directors of	(65)
„ „ transfer days at	(13)
Banks and Bankers in London	(66)
Bishops of Church of England	(51)
„ „ British colonies	(60)
Calendar for 1870	(14)
Cambridge University	(69)
Chronicle of Events and Occurrences, 1868-9	275
Church and Education, statutes regarding	207, 221
Circuits of the Judges	(81)
Club Houses in London	(85)
Colonial Governors	(61)
Commons, House of	(44)
Co-operation Abroad	184
Corporation of London	(56)
Correspondence of eras with 1870	(3)
County Courts in England and Wales	(52)
Courts of Law in England	(51)
Crime and Pauperism, statutes regarding	208, 227
„ „ statistics of	263
Currency, statistics of	251
Dublin University	(76)
Durham University	(70)
Eclipse of the Sun of 1868, by E. Dunkin	3
Eclipses in 1870	(11)
Education, statistics of	270
Emigration, statistics of	273
Exhibitions in and near London	(90)
Finance and Taxation, Acts of Parliament concerning	209, 230
„ „ statistics of	248
High Water at London	(6)
„ „ Outports	(5)
Holidays at Public Offices	(13)
House of Commons	(44)
„ Lords	(40)
Inns of Court	(77)
Insurance Companies	(88)
Ireland, Church of	(60)
„ Lords-Lieutenant of	(60)
Irish Universities	(76)

	PAGE
Law and Justice, Acts of Parliament concerning	211, 233
Legislation of 1869	206
Licences and Assessed Taxes	(91)
Local Government, Acts of Parliament concerning	213, 240
London, Lord Mayor and Aldermen of	(56)
London University	(70)
Lords-Lieutenant of England and Wales	(54)
„ „ Ireland	(60)
„ „ Scotland	(57)
Maynooth College	(77)
Members of the House of Commons	(44)
„ „ Peers	(40)
Ministry of Great Britain	(39)
Moonlight, Table of Duration of	(10)
National Gallery, The, by J. Thorne	87
Navy, Flag Officers	(62)
„ Agents	(67)
„ Acts of Parliament relating to	206
Necrological Table	285
Notes on Co-operation Abroad, by W. E. A. Axon	184
Notes for the Year	(11)
Occultations of Stars	(8)
Officers of the Queen's Household	(38)
Oxford University	(67)
Pauperism, statistics of	263
Peers, House of	(40)
Population, statistics of	262
Post-office, abstract of rules of	(86)
Prince of Wales's Household	(38)
Progress of Australian Native Industries	61
Public Health, statistics of	269
Public Works, Acts of Parliament concerning	215, 242
Quarter Sessions in 1870	(12)
Royal Commission on Water Supply, by A. Locker	41
Royal Family, members of	(38)
Scotland, Church of	(57)
„ Lords-Lieutenant of	(57)
Scottish Universities	(75)
Self-imposed Taxation, by S. Smiles	27
Social Economy, statistics of	272
Sovereigns and Governors of countries	(82)
Suez Canal, the Great, by G. Dodd	105
Sun, eclipse of, 1868	3
„ table of rising and setting	(2)
Taxation, Self-imposed	27
Terms and Returns in 1870	(13)
Trade and Industry, statistics of	252
„ Shipping, Acts of Parliament concerning	216, 244
Transfer Days at the Bank of England	(13)
Water Supply, Commission on	41

24 DE 69

LONDON: PRINTED BY WILLIAM CLOWES AND SONS, DUKE STREET, STAMFORD STREET, AND CHARING CROSS.

ADVERTISING SHEET
OF THE
BRITISH ALMANAC AND COMPANION.

ATLAS FIRE & LIFE ASSURANCE OFFICE,
92, CHEAPSIDE, LONDON.

Established 1808,

And Empowered by Act of Parliament of the 54th Geo. III. c. 79.

Capital, £1,200,000.

DIRECTORS.

Chairman.—THOMAS CHAPMAN, Esq., F.R.S.
Deputy-Chairman.—BENJAMIN BUCK GREENE, Esq.

SIR WILLIAM J. W. BAYNES, Bart.
ARTHUR EDWARD CAMPBELL, Esq.
JAMES PATTISON CURRIE, Esq.
JOSEPH GROTE, Esq.
JOHN OLIVER HANSON, Esq.
JOHN GEORGE MACLEAN, Esq.
REAR-ADMIRAL MONTGOMERY.
JAMES PHILLIPS, Esq., F.G.S.
JOSEPH PULLEY, Esq.
PHILIP AINSLIE WALKER, Esq.

Auditors.—CHARLES GASSIOT, Esq., and RICHARD BLANEY WADE, Esq.
Secretary.—RICHARD RAY, Esq.
Actuary.—WILLIAM HENRY TYNDALL, Esq. *Solicitor.*—THOMAS BROWNING, Esq.
Consulting Actuary.—CHARLES ANSELL, Esq., F.R.S.
Medical Officer.—WILLIAM COULSON, Esq., F.S.A.
Bankers.—Messrs. PRESCOTT, GROTE, CAVE and CAVE.

This Office has been established more than 60 years, and its present magnitude and prosperity prove the soundness of the principles on which it has been conducted.

LIFE DEPARTMENT.

The Accumulated Premiums are over £1,650,000. The Annual Income exceeds £170,000
The sum of £4,911,321 has been paid in claims under Life Policies.
Large Bonuses have been declared and paid as additions to the amounts assured.
Premiums on Policies have been greatly reduced where parties have so applied the Bonuses on their Policies.
Persons Assuring in Great Britain have the option of *Participating Rates of Premium*, or of *Non-Participating Rates.*
Combined provision may be made for old age and early death, so that a person may secure a sum to be paid *to himself* at an age agreed upon, or to his executors if he should die before that age.
Residence in Countries beyond the limits of Europe is allowed on favourable terms; in most temperate climates without extra Premium, beyond a moderate charge for the voyage only. *Whole world* Assurances are granted.
Notices of the Assignment of Life Policies are received and acknowledged.
Advances are made on Policies to the extent of their value.
Persons desiring to surrender their Assurances may receive their value in money or in lieu thereof, may obtain a new Policy *without further payment of Premium.*
The Directors are ready to receive proposals for Assurances or any contingency involving payment of a sum at death.

FIRE DEPARTMENT.

This Company undertakes the Assurance of almost every species of Property in the United Kingdom, at Rates of Premium and upon principles which will be found quite as advantageous to the interests of the Assured as those offered by any other Office. The Directors can confidently refer to the well-known character of the Company for liberality and promptitude in the discharge of claims made upon it during the many years it has been established.
No charge made for Policy Stamps.
Renewals should be paid within fifteen days after the respective Quarter-days when they become due.
Losses occasioned by *Lightning* will be paid. The Policies of the *Company* extend to cover *Losses* occasioned by the *Explosion of Gas.*
The Company is ready to receive applications for agencies in those Towns and Districts in which it is not at present represented. Application to be made to the Secretary.
N.B.—ABOLITION OF THE GOVERNMENT DUTY.—*From and after Midsummer*, 1869, *all Fire Assurances are exempt from the payment of Government Duty.*
Tables of Rates, Forms of Proposal, and any information needful to effect Life or Fire Assurances, may be obtained on application to the Office, No. 92, Cheapside, London, or to any of the Company's Agents.

November, 1869.

THE

Clergy Mutual Assurance Society.

ESTABLISHED IN 1829.

OFFICE, 2, BROAD SANCTUARY, WESTMINSTER.

Patrons.

HIS GRACE THE ARCHBISHOP OF CANTERBURY.
HIS GRACE THE ARCHBISHOP OF YORK.

President.

THE RIGHT HON. AND RIGHT REV. THE LORD BISHOP OF LONDON.

Trustees.

HIS GRACE THE ARCHBISHOP OF CANTERBURY.
HIS GRACE THE ARCHBISHOP OF DUBLIN.
THE LORD BISHOP OF WINCHESTER.
THE ARCHDEACON OF MAIDSTONE.

Directors.

Chairman.—THE ARCHDEACON OF LONDON.
Deputy Chairman.—THE HON. EDWARD W. DOUGLAS.

SIR E. ANTROBUS, BART., M.A.
CHARLES JOHN BAKER, ESQ.
THE ARCHDEACON OF BATH.
REV. CANON BLOMFIELD, M.A.
THE DEAN OF BRISTOL.
REV. JAMES C. BROWNE, D.C.L.
REV. J. L. CAMERON, M.A.
REV. ARTHUR P. PUREY-CUST, M.A.
REV. C. B. DALTON, M.A.
REV. W. H. DICKINSON, M.A.
ROBERT FEW, ESQ.
REV. J. D. GLENNIE, M.A.
CHRISTOPHER HODGSON, ESQ., M.A.
REV. CANON LONSDALE, M.A.
THE ARCHDEACON OF MAIDSTONE.
THE DEAN OF MANCHESTER.
REV. CHARLES MARSHALL, M.A.
REV. CANON NEPEAN, M.A.
THE ARCHDEACON OF NOTTINGHAM.
W. H. STONE, ESQ., M.D.
REV. CANON STONE, M.A.
CHARLES SUMNER, ESQ., M.A.
REV. JOSEPH TAYLOR, M.A.
REV. WILLIAM WEBSTER, M.A.
THE ARCHDEACON OF WESTMINSTER.
REV. S. C. WILKS, M.A.
REV. DAVID WILLIAMS, M.A.
F. L. WOLLASTON, ESQ., M.A.

Counsel.—THOMAS BOURDILLON, ESQ., M.A., Stone Buildings, Lincoln's Inn.
Solicitors.—MESSRS. LEE & BOLTON, No. 2, Broad Sanctuary, Westminster.
Auditors.—FREDERICK MILDRED, ESQ.—CHARLES BARBER, ESQ.—ROBERT J. LODGE, ESQ.
REV. ALEXANDER WILSON, M.A.
Bankers.—MESSRS. COUTTS & CO. *Actuary.*—STEWART HELDER, ESQ.
Consulting Actuary.—CHARLES ANSELL, ESQ., F.R.S.
Physician.—DR. STONE, 13, Vigo Street, W. *Secretary.*—REV. JOHN HODGSON, M.A.

The clergy and all others qualified to make Assurances upon Life in this Society are informed that Assurances upon Life may be made upon payment of Reduced Annual Premiums, viz, upon payment of "four-fifths" of the rates chargeable according to the Society's Table, *subject to certain conditions.* A Prospectus setting forth the table of reduced rates, and the special conditions referred to, may be had by application at the Office.

Bonus.—The whole available Bonus is the sole property of Life Assurers; no part whatever is taken from it to be shared amongst proprietors. At the end of every fifth year, profits are equitably apportioned amongst existing Life Assurances. By means of Bonus upwards of One Hundred of the earlier Life Assurances have been relieved altogether from the payment of Annual Premiums, and additions made to sums Assured; £200,500 was divided amongst Life Assurances in May, 1866.

Assurers have the privilege at the time of making an Assurance of selecting the mode in which the Bonus, whenever due, shall be applied, *i.e.*, either in an immediate Cash payment, or to the reduction of the Annual Premium, or to the increase of the Capital sum assured.

Next Bonus in 1871. Assurances made previously to such year will share therein.

ASSURANCES may be effected on LIVES, SURVIVORSHIPS, &c. &c., as stated in the Society's Prospectus, to any amount not exceeding £7,500.

Applications for Prospectuses, or further information, to be made at the Office, 2, BROAD SANCTUARY, WESTMINSTER.

This Society is strictly confined to the Clergy of the Church of England and of the Episcopal Church of Scotland, their Wives and Families, and the near relations of themselves and Wives.

Prospectuses, Bonus Accounts, &c., to be had at the Office, on personal application, or by letter.

Also, "NOTES UPON LIFE ASSURANCE," by the Rev. JOHN HODGSON, M.A., Secretary.

THE

Eagle Insurance Company,

79, PALL MALL,

LONDON, S.W.

DIRECTORS.

WILLIAM FREDERICK DE LA RUE, Esq., *Chairman.*

ROBERT A. GRAY, Esq., *Deputy-Chairman.*

CHARLES BISCHOFF, Esq.
THOMAS BODDINGTON, Esq.
CHARLES CHATFIELD, Esq.
Sir J. BULLER EAST, Bart., D.C.L.
WILLIAM AUGUSTUS GUY, M.D., F.R.S.
CHARLES THOMAS HOLCOMBE, Esq.
JOSHUA LOCKWOOD, Esq.
JAMES MURRAY, Esq.
PHILIP ROSE, Esq.
GEORGE RUSSELL, Esq.
THOMAS GODFREY SAMBROOKE, Esq.
Rear-Admiral TINDAL.
The Rt. Hon. Sir JOHN YOUNG, Bart., K.C.B.

Auditors—THOMAS ALLEN, Esq.; HENRY ROSE, Esq.

Medical Officers—J. W. OGLE, M.D.; WM. COOKE, Esq., M.D.

Surgeon—GEORGE CURSHAM, M.D.

The Business of the Company comprises Assurances on Lives and Survivorships, Granting of Contingent Annuities, Loans of Money on Mortgage, &c.

The realized Assets of this Company are upwards of **Three Millions** sterling.

The Annual Income is about a **Half-Million** sterling.

The number of existing Policies is upwards of **Twenty Thousand.**

The total Amount Insured exceeds **Thirteen Millions** sterling.

The Divisions of Surplus are Quinquennial, and the whole surplus (less twenty per cent. only) is distributed amongst the Assured.

At the last Division of Surplus the additions to the Sums Assured, under Policies effected upon the participating scale, ranged, according to the age of the life assured, from 20 to 70 per cent. of the Premiums paid.

The Premiums required, although moderate, entitle the Assured to 80 per cent. of the Quinquennial Surplus.

The Lives Assured are permitted, in time of Peace, without extra charge, to reside in any country (Australia and California excepted) north of 33 degrees north latitude, or south of 33 degrees south latitude, or to pass by sea (not being seafaring persons by profession) between any places lying north of 33 degrees north latitude, or lying south of 33 degrees south latitude.

All Policy Stamps and Medical Fees required on effecting Assurances are paid by the Company.

By recent enactments, persons are exempt, under certain restrictions, from Income Tax, as respects so much of their income as they may devote to Assurance on Lives.

The Annual Reports of the Company's state and progress, Prospectuses, and Forms, may be had, or will be sent, post free, on application at the Office, or to any of the Company's Agents.

EQUITY AND LAW LIFE ASSURANCE SOCIETY,

18, LINCOLN'S-INN FIELDS, LONDON, W.C.

ESTABLISHED 1844.

CAPITAL £1,000,000, FULLY SUBSCRIBED.

TRUSTEES.

THE RIGHT HON. EDWD. CARDWELL, M.P.
THE RIGHT HON. SIR WILLIAM ERLE.
THE RIGHT HON. SIR FREDERICK POLLOCK, Bart.
THE RIGHT HON. SIR J. TAYLOR COLERIDGE.
THE HON. THE VICE-CHANCELLOR, SIR RICHARD MALINS.
JOHN ELLIS CLOWES, Esq.
THOMAS GLOVER KENSIT, Esq.

DIRECTORS.

GEORGE LAKE RUSSELL, Esq., *Chairman.*
JOHN MOXON CLABON, Esq., *Deputy-Chairman.*
Actuary and Secretary—THOMAS BOND SPRAGUE, Esq., M.A.

The NEW BUSINESS of **1868** comprised Insurances for **£356,833**; and the Premiums received thereon amounted to **£11,318.**

The total INCOME of **1868** was **£126,627,** and the outgoings of every description **£65,332.** The available ASSETS at the end of the year were **£683,773.**

The EXPENSES of MANAGEMENT now amount to only *Four per cent.* on the Income.

The realized PROFITS are ascertained every Five Years; and NINE-TENTHS of the whole are divided among the Assured. As considerably more than one-tenth of the Profits is derived from Policies which do not participate in the Profits, it will be seen that *the Assured have greater advantages in this Society than if they formed a Mutual Insurance Company,* dividing among themselves the whole of the Profits derived from their own Policies.

At the DIVISION of PROFITS, to 31st December, 1864, the sum of £62,961 6*s.* was divided among the Assured, holding Policies for £1,339,608; and the Reversionary Bonuses added to the Policies amounted to £112,000.

THE FOLLOWING TABLE SHOWS THE TOTAL BONUSES ADDED TO POLICIES of £1,000 EACH UP TO 31ST DEC., 1864:—

Age at Entry.	Sum Assured.	NUMBER OF PREMIUMS PAID.			
		Twenty.	Fifteen.	Ten.	Five.
	£	£ *s.*	£ *s.*	£ *s.*	£ *s.*
20	1000	303 10	228 0	161 10	71 10
30	1000	342 10	250 10	176 0	77 0
40	1000	385 0	280 10	197 0	85 0
45	1000	411 10	303 10	210 0	90 10
50	1000	438 0	334 0	231 0	99 10
55	1000	.. ..	382 10	265 0	113 10
60	1000	.. ..	450 10	316 10	133 10

The PREMIUMS are calculated for every half-year of Age.

The CONDITIONS of the POLICIES allow persons whose lives are insured to reside in any part of the world distant more than 33° from the Equator.

The Business of the Society includes the PURCHASE and the Granting of LOANS upon the security of LIFE INTERESTS and REVERSIONS; also the Granting of IMMEDIATE ANNUITIES.

The ANNUAL REPORTS of the Directors are regularly printed, with full accounts of the Receipts and Expenditure, and may be obtained by written or personal application at the Office.

The Guardian Fire & Life Assurance Company.

ESTABLISHED 1821.

11, LOMBARD STREET, LONDON, E.C.

SUBSCRIBED CAPITAL, £2,000,000.

Directors.

Chairman—WILLIAM STEVEN, Esq.
Deputy-Chairman—FREDERICK H. JANSON, Esq.

HENRY HULSE BERENS, Esq.
HENRY BONHAM-CARTER, Esq.
CHARLES WILLIAM CURTIS, Esq.
CHARLES F. DEVAS, Esq.
FRANCIS HART DYKE, Esq.
Sir WALTER R. FARQUHAR, Bart.
JAMES GOODSON, Esq.
ARCHIBALD HAMILTON, Esq.
THOMSON HANKEY, Esq.
RICHARD M. HARVEY, Esq.
JOHN G. HUBBARD, Esq.
G. J. SHAW LEFEVRE, Esq., M.P.
JOHN MARTIN, Esq.
ROWLAND MITCHELL, Esq.
JAMES MORRIS, Esq.
ABRAHAM J. ROBARTS, Esq.
HENRY VIGNE, Esq.

Auditors.

HENRY S. THORNTON, Esq.; CORNELIUS PAINE, Esq.; NOEL WHITING, Esq.
Sec.—THOMAS TALLEMACH, Esq. *Actuary*—SAMUEL BROWN, Esq., *Pres. Ins. Actuaries.*
Superintendent of Fire Department—ISAAC DELVALLE, Esq.
Physician—Dr. J. RUSSELL REYNOLDS, F.R.S., 38, Grosvenor Street, W.
Solicitors—Messrs. PARKIN and PAGDEN, 5, New Square, Lincoln's Inn, W.C.
Surveyor—J. JENNINGS, Esq., Langham Street, W.
Bankers—Messrs. MARTIN & Co., 68, Lombard Street; Messrs. COUTTS & Co., 59, Strand.

LIFE DEPARTMENT.

Under the Provisions of an Act of Parliament, this Company now offers to new Insurers EIGHTY PER CENT. OF THE PROFITS, AT QUINQUENNIAL DIVISIONS, OR A LOW RATE OF PREMIUM, without participation of Profits. The next Valuation will be declared in June, 1870.

At the last Quinquennial valuation at Christmas, 1864, the Life Assurances in force, exclusive of Bonuses thereon, amounted to upwards of £4,500,000, the Income from the Life Branch £212,000 per annum, and the Life Assurance Fund exceeded £1,656,000 invested in first class securities.

A Statement of the Assets and Liabilities may be obtained on application.

Example of Annual Premiums for the Assurance of £100.

Age not above	At Death.		At Age of 60, or upon Death before, without Profits.	Age not above	At Death.		At Age of 60, or upon Death before, without Profits.
	With Profits.	Without Profits.			With Profits.	Without Profits.	
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
20	2 1 0	1 13 3	2 5 9	40	3 5 0	2 17 0	5 3 9
25	2 5 4	1 17 4	2 14 2	45	3 14 11	3 6 11	7 2 2
30	2 10 7	2 2 7	3 5 5	50	4 8 0	4 0 0	10 19 3
35	2 17 0	2 9 0	4 0 9	60	6 7 2	6 0 0	....

N.B.—The limits for Foreign Residence and Travel have been recently greatly extended, and in certain cases Policies may be issued free from *all* restrictions.

No expense incurred beyond payment of premium.

FIRE DEPARTMENT.

Insurances against loss and damage by Fire are effected upon every kind of Property at home and abroad.

The Duty to Government is now abolished, thereby reducing the Annual Charge for Insurance on ordinary risks to 1*s.* 6*d.* for £100.

No expense is incurred on effecting an Insurance, or in transferring Insurances from other Offices, beyond the payment of the Premium.

Forms of Proposal, Prospectus, &c., may be obtained from the Office.

T. TALLEMACH, *Secretary.*

HAND-IN-HAND

FIRE AND LIFE INSURANCE SOCIETY,

1, NEW BRIDGE ST., BLACKFRIARS, LONDON, E.C.

Instituted in 1696.—*Extended to Life Insurance*, 1836.

DIRECTORS.

The Hon. WILLIAM ASHLEY.
T. PALMER CHAPMAN, Esq.
Gen. the Hon. Sir EDWARD CUST.
JOHN LETTSOM ELLIOT, Esq.
JOHN GURNEY HOARE, Esq.
FREDERICK LOCKER, Esq.
T. FULLER MAITLAND, Esq.
JOHN SPERLING, Esq.
GORDON E. SURTEES, Esq.
THOMAS TURNER, Esq.
F. MAITLAND WILSON, Esq.
W. ESDAILE WINTER, Esq.

AUDITORS.

Colonel the Hon. P. F. CUST. JOHN LETTSOM ELLIOT, Esq. ANDREW JOHNSTON, Esq., M.P.

Bankers—Messrs. GOSLINGS and SHARPE, 19, Fleet Street.
Physician—THOMAS K. CHAMBERS, M.D., 64, Brook Street, Grosvenor Square.
Solicitors—Messrs. NICHOLL, BURNETT, and NEWMAN, 8, Howard Street, Strand.
Actuary and Secretary—JAMES M. TERRY, Esq.
Assistant Secretary—BENJAMIN BLENKINSOP, Esq.
Assistant Actuary—JAMES TERRY, Esq.

The oldest Insurance Office in existence. Founded and still conducted on the **Mutual System.**

Large returns made to Members **in each Department.**

The whole of the Profits are divided annually amongst the Members of Five Years' standing and upwards—there being no Shareholders.

The rate of abatement of Premium thereby given for the current year on Life Policies is **60 per cent.** for the Old Series, and **50 per cent.** for the New Series.

The rate of return on Septennial Fire Policies (charged at 1*s.* 6*d.* per cent.) is **66 per cent.**

The Directors are willing to appoint as Agents, persons of good position and character.

24th DECEMBER, 1868.

Claims paid on Life Policies to this date	£738,092.
Returned in Abatement of Premiums do.	555,544.

ASSETS.

Accumulated Fund	£1,252,174.
Present Value of Life Premiums	1,271,369.

LIABILITIES.

Present Value of Sums Insured (£3,166,596). . .	£1,542,361.
Present Value of Life Annuities (£8,737 per Annum)	68,295.

Further details as to the Assets and Liabilities of the Office, may be had on application to the Secretary.

By order of the Board,

JAMES M. TERRY, *Actuary and Secretary.*

THE

LONDON LIFE ASSOCIATION,

81, King William Street, London, E.C.

Established 1806.

PRESIDENT—BARON HEATH.

VICE-PRESIDENT—ALFRED HEAD, Esq.

TRUSTEES.

FRANCIS HENRY MITCHELL, Esq.
DAVID SALOMONS, Esq., M.P.
GEORGE FRED. POLLOCK, Esq.
JAMES EWING MATHIESON, Esq.

DIRECTORS.

JOHN BAGGALLAY, Esq.
WILLIAM CORRIE, Esq.
JOHN COSTEKER, Esq.
HENRY T. CURTIS, Esq.
THOMAS DEVAS, Esq.
SAMUEL FISHER, Esq.
CHARLES J. FURLONGER, Esq.
HENRY S. KING, Esq.
JOS. JOHNSON MILES, Esq.
ROBERT POTT, Esq.
S. WILLIAM SILVER, Esq.
W. FLEXMAN VOWLER, Esq.

Has Policies now in force amounting to . £7,300,000
Has a Fund Invested in First Class Securities of more than 3,000,000
Has Paid Policy Claims amounting to . . 5,540,000

The ASSOCIATION employs NO AGENTS, and pays NO COMMISSION in any shape, for the introduction of Policies.

Its expenses are small, being little more than Three per cent. of its gross income.

It investigates its affairs every year, and applies the surplus SOLELY in reduction of the Premiums, which by this means have been reduced, on the average, One per cent. per annum for the last 29 years, and this increasing rate of reduction is expected to continue.

PREMIUMS commenced before JANUARY, 1856, are reduced 89 per cent.
„ „ JULY, 1865, will be reduced 79 „
„ commencing NOW are expected to be reduced 71 „

These reductions commence after the 7th payment.

EDWARD DOCKER, *Secretary.*

September, 1869.

THE LONDON ASSURANCE CORPORATION,

For Fire, Life, & Marine Assurances.

Incorporated by Royal Charter, A.D. 1720.

OFFICES—No. 7, ROYAL EXCHANGE, E.C.; AND No. 7, PALL MALL, S.W.

JAMES BLYTH, Esq., *Governor.*
EDWIN GOWER, Esq., *Sub-Governor.*
DAVID POWELL, Esq., *Deputy-Governor.*

Directors.

NATH. ALEXANDER, Esq.	BONAMY DOBREE, Esq.	HENRY J. B. KENDALL, Esq.
J. A. ARBUTHNOT, Esq.	JOHN ENTWISLE, Esq.	CHARLES LYALL, Esq.
HARVEY BRAND, Esq.	GEORGE L. M. GIBBS, Esq.	CAPT. R. W. PELLY, R.N.
EDWARD BUDD, Esq.	ROBERT GILLESPIE, Esq.	WILLIAM RENNIE, Esq.
ALFRED D. CHAPMAN, Esq.	HARRY GEO. GORDON, Esq.	P. F. ROBERTSON, Esq.
MARK W. COLLET, Esq.	A. C. GUTHRIE, Esq.	ROBERT KYRIE, Esq.
SIR F. CURRIE, Bart.	JOHN A. HANKEY, Esq.	LEWIS A. WALLACE, Esq.
F. G. DALGETY, Esq.	LOUIS HUTH, Esq.	WILLIAM B. WATSON, Esq.

Secretary.—JOHN P. LAURENCE, Esq. *Actuary.*—ARTHUR H. BAILEY, Esq.

Underwriter.—JOHN ANTHONY RUCKER, Esq.

Manager of the Fire Department.—THOS. B. BATEMAN, Esq.

Physician.—EDWARD CLAPTON, M.D., St. Thomas's-street, Southwark.

West End Office, No. 7, Pall Mall, S.W.

HENRY KINGSCOTE, Esq. CHARLES WILLIAM EARLE, Esq.

LIFE DEPARTMENT.

The expenses of management are paid by the Corporation, and not charged to the Life Assurance Funds—an advantage afforded by no other Office.

Assurances may be effected without Participation in Profits, at low rates of Premium, or with Participation in Profits, upon either of the following plans, viz.:

The Profits being appropriated as an Annual Abatement of Premium on Policies of Five Years' standing, the abatement from the original Premium for the year 1868 was at the rate of 40 per cent.

The Profits being appropriated at the end of every Five Years, either in increase of the Sum Assured, or as an immediate Cash payment. At the last division made to the 31st December, 1865, the Cash Bonus amounted to more than 28 per cent. of the Premiums paid during the quinquennial period, the corresponding Reversionary Bonus averaging nearly two per cent. per annum on the Sum Assured.

Enlarged limits for Foreign Travelling and Residence, without any extra charge; also, moderate and uniform rates for all Tropical climates have been adopted.

FIRE DEPARTMENT.

FIRE INSURANCES effected at Moderate Rates upon every Description of Property.

MARINE DEPARTMENT.

MARINE INSURANCES can be effected at the HEAD OFFICE of the Corporation, and at CALCUTTA, MADRAS, BOMBAY, MAURITIUS, HONG KONG, and SHANGHAI.

North British and Mercantile
INSURANCE COMPANY.

ESTABLISHED 1809.

Incorporated by Royal Charter and Special Acts of Parliament.

At the Annual General Meeting of the Proprietors, held in Edinburgh, on 1st March, 1869, JOHN WHITE CATER, Esq., in the Chair, a Report by the Directors was read, showing the following results for the year 1868:—

FIRE DEPARTMENT.

The Net Premiums during the year amounted to . . .	£415,544
During the year 1867 the Net Premiums were . . .	333,985
Showing an increase in 1868 of . . .	£81,559
The Total Losses by Fire during the year amounted to .	£222,792

LIFE DEPARTMENT.

New Policies were issued, insuring	£738,582
and adding to the Revenue in New Premiums the sum of	23,574

ANNUITY DEPARTMENT.

41 Bonds were granted, for which was received the sum of	£17,268
During the year 36 Annuities fell in, relieving the Company of annual payment of	1,305

On the motion of the Chairman, seconded by George A. Jamieson, Esq., the Report was unanimously approved of, and a Dividend was declared at the rate of £12 per cent. (equal to 15*s.* a Share), and a Bonus of £4 per cent. (or 5*s.* per share), making in all 20*s.* a Share on the paid-up Capital Stock of the Company, payable on 15th March, free of Income Tax.

After paying this Dividend and Bonus, and all expenses, the result of the business for the year has been to add **£44,452** to the Reserves of the Company.

The Fund now amounts to	£435,668
The Annual Revenue to	801,801
And the Total Accumulated Fund to . .	2,838,118

CHIEF OFFICES.

LONDON, 61, THREADNEEDLE STREET, E.C.

WEST END OFFICE, 8, WATERLOO PLACE, S.W.

EDINBURGH, 64, PRINCES STREET.

By Order,

F. W. LANCE, *Secretary.*

PROVIDENT LIFE OFFICE,

No. 50, REGENT STREET, LONDON, W.

ESTABLISHED 1806.

Invested Capital, £1,773,032. Annual Income, £223,667.

Bonuses Declared, £1,780,651.

Claims Paid since the Establishment of the Office, £4,312,002.

The Directors of the PROVIDENT LIFE OFFICE feel it to be their duty at the present time to place before their policy-holders and the public such a statement of the affairs of the Office as shall be intelligible to every reader; they have therefore prepared Tables in which are produced in detail the sums insured at each age by all their policies now in existence, and the annual premiums payable to the Office. These show an *ultimate liability* of £5,025,310 6*s.* 1*d.* and a *present annual income* from premiums of £141,682 13*s.* 8*d.*

A third Table shows that in addition to *this annual income* the assets, realized and invested, amount to £1,772,363 19*s.*, producing in like manner an *annual income* in the shape of interest.

So far this is a simple statement of an ordinary account. The question now to be determined by an actuarial operation is how far will these assets and incomes serve to realize the five millions of liability. The answer is given—a surplus of £367,459 being shown as the result.

The solemn declaration which accompanies the original statement, and the fact that the accounts are open to the criticism of the whole Society of Actuaries and of all the Managers of the Life Offices of the United Kingdom, must be held a sufficient proof of their correctness until the reverse be shown.

The Tables referred to may be obtained upon application at the Head Office of the Society, No. 50, Regent Street, W.; or at the City Office, No. 14, Cornhill, E.C.

Examples of Bonuses added to Policies issued by

THE PROVIDENT LIFE OFFICE.

Number of Policy.	Date of Policy.	Annual Premium.	Sum Insured.	Amount with Bonus Additions.
		£ *s.* *d.*	£	£ *s.* *d.*
4,718	1823	194 15 10	5,000	11,658 9 2
5,532	1825	36 16 8	1,000	2,182 11 8
5,744	1825	155 16 8	4,000	8,883 5 4
5,915	1826	18 8 4	500	1,062 19 7
8,452	1834	38 19 2	1,000	1,806 15 10
10,605	1841	31 16 8	500	896 6 2
12,264	1845	22 13 4	500	732 11 8

JOHN HODDINOTT, *Secretary.*

EQUITABLE ASSURANCE SOCIETY.

TEMPORARY OFFICES:
No. 11, NEW BRIDGE STREET, BLACKFRIARS.

Directors.

THE RIGHT HON. LORD TREDEGAR, *President.*

WILLIAM FREDERICK POLLOCK, Esq., and JAMES SPICER, Esq., *Vice-Presidents.*

FREDERICK COWPER, Esq.	RICHARD GOSLING, Esq.	GEORGE SCOVELL, Esq.
CHARLES CURLING, Esq.	PHILLIP HARDWICK, Esq.	JOHN CHAS. TEMPLER, Esq.
WILLIAM EDWARDS, Esq.	SIR W. C. JAMES, Bart.	RICHARD TWINING, Esq.
GEORGE FENNING, Esq.	JOHN ALLDIN MOORE, Esq.	JOHN WALTER, Esq., M.P.

The EQUITABLE, established in 1762, is the oldest Mutual Life Office in the United Kingdom.

The entire profits are divisible among its members, no portion of the same being diverted either for "commission" to agents or for dividends on shares.

During the century of its existence it has paid £19,000,000 in claims, and £17,800,000 for bonuses on the same.

The Invested Capital on the 30th of June, 1869, consisted of—

£2,614,517 15 2	Cash advanced on Mortgage.
580,000 0 0	Stock in the 3 per Cent. Reduced Bank Annuities.
475,000 0 0	Stock in the 3 per Cent. Consolidated Bank Annuities.
200,000 0 0	Stock in the New 3 per Cent. Annuities.
540,000 0 0	Cash advanced on Debentures guaranteed by the Secretary of State for India.
75,000 0 0	Cash advanced on English Railway Debentures.
180,150 0 0	Cash advanced on Security of Policies.

The Reserve at the last rest, in December, 1859, exceeded £770,000, as a basis for future divisions.

Loans on Policies.—The Directors make advances on deposit of the Policies.

☞ *A Court of Directors is held every* Wednesday, *from Eleven to One o'Clock, to receive Proposals for new Assurances; and a Short Account of the Society may be had on Application, personally or by post, at the Office.*

THE

General Reversionary & Investment Company.

Office—No. 5, WHITEHALL, LONDON, S.W.

ESTABLISHED 1836.

Further Empowered by Special Act of Parliament, 14 and 15 Vict. cap. 130.

CAPITAL £500,000.

DIRECTORS.

Chairman—GEORGE PERCY ELLIOTT, Esq.

Deputy-Chairman—CHARLES THOMAS HOLCOMBE, Esq.

THOMAS BLACKALL, Esq., M.D.	THOMAS GODFREY SAMBROOKE, Esq.
JOHN CHAVE LUXMOORE, Esq.	SEYMOUR TEULON, Esq.
Colonel JOSEPH W. JASPER OUSELEY.	HENRY WALMISLEY, Esq.

Auditors—WM. R. BARKER, Esq., GEO. HUGHES, Esq., and CHAS. H. SAVORY, Esq.

Bankers—Messrs. DRUMMOND.

Solicitors—Messrs. C. J. & H. SHOUBRIDGE, 1, Lincoln's Inn Fields, W.C.

The business of this Company consists in the PURCHASE of, or LOANS upon, REVERSIONARY INTERESTS, vested or contingent, in *Landed* or *Funded Property*, or *Securities*; also

LIFE INTERESTS in *Possession*, as well as in *Expectation*; and

POLICIES of INSURANCE upon LIVES.

Loans upon Reversions may be obtained either at an Annual Interest, or in consideration of deferred charges, payable upon the *Reversions* falling in.

IMMEDIATE ANNUITIES are likewise granted upon the latter principle to persons entitled to Reversionary Interests, who may thus obtain an income until their property falls into possession, without being called upon for any payment until that event.

Prospectuses and Forms of Proposals may be obtained from the Secretary, to whom all communications should be addressed.

By order of the Board of Directors,

WM. BARWICK HODGE, *Actuary and Secretary.*

GOVERNESSES' BENEVOLENT INSTITUTION.

INCORPORATED BY ROYAL CHARTER,

WITH POWER TO HOLD LAND BY GIFT, PURCHASE, OR BEQUEST.

BOARD OF MANAGEMENT.

THE HON. WILLIAM ASHLEY.
PATRICK BLACK, Esq., M.D.
THE REV. ALFRED J. BUSS, B.A.
B. BOND CABBELL, Esq., F.R.S.
ARTHUR RISDON CAPEL, Esq.
JAMES CAPEL, Esq.
F. PATEY CHAPPELL, Esq.
W. TIMBRELL ELLIOTT, Esq.
JOHN WILLIAM HALE, Esq.
EDWARD B. HARTOPP, Esq., M.P.
THE LORD HOUGHTON.
THE HON. ARTHUR KINNAIRD, M.P.
J. TIDD PRATT, Esq., F.S.A.
THOMAS G. SAMBROOKE, Esq.
THE EARL OF SHREWSBURY AND TALBOT.
W. JESSE STREET, Esq.
EDWARD THORNTON, Esq.
W. FOSTER WHITE, Esq.
EDWARD WILDER, Esq.
T. PARRY WOODCOCK, Esq.

Honorary Secretary—MRS. DAVID LAING.
Secretary—CHARLES WILLIAM KLUGH, Esq., 32, Sackville Street, W.
Secretary to the Provident Fund—JOHN EVEREST, Esq.

The objects of this Society are—

Temporary Assistance to Governesses in distress, afforded privately and delicately, through the Ladies' Committee.

Annuity Fund. Elective Annuities to Aged Governesses, secured on invested capital, and thus independent of the prosperity of the Institution.

Provident Fund. Provident Annuities purchased by Ladies in any way connected with Education, upon Government Security, agreeably to the Act of Parliament. This branch includes a Savings Bank.

A Home for Governesses during the intervals between their engagements.

A System of Registration, entirely free of expense.

An Asylum for the Aged.

Membership consists in the payment of an annual Guinea, or of Ten Guineas in one sum. Subscribers are entitled to vote for Annuities in the proportion of one Vote for each Annual Half-Guinea not in arrear, and for each Donation of Five Guineas. Subscriptions are due on the 1st of January, and can always be remitted by Post Office Order, or by a Cheque crossed 'Sir S. Scott & Co.'

London and Provincial Law Assurance Society,

No. 21, FLEET STREET, E.C.

CAPITAL, ONE MILLION.

ABBOTT, CHARLES JAMES, Esq., New Inn.
BENNETT, ROWLAND NEVITT, Esq., Lincoln's Inn.
BLOXAM, C. J., Esq., 1, Lincoln's Inn Fields.
CHOLMELEY, STEPHEN, Esq., Lincoln's Inn Fields.
EDLE, PETER, Esq., Q.C., Park Crescent.
FANE, W. D., Esq., Norwood Hall, Southwell, Notts.
FREEMAN, LUKE, Esq., Coleman Street.
GASELEE, Mr. Serjeant, M.P., Serjeants' Inn.
GWINNETT, WILLIAM HENRY, Esq., Cheltenham.
HEDGES, JOHN KIRBY, Esq., Wallingford.
HOPE-SCOTT, J. R., Esq., Q.C., Temple, *Chairman.*
JAY, SAMUEL, Esq., Lincoln's Inn.
LAW, H. S., Esq., Bush Lane, *Deputy-Chairman.*
LAWRANCE, EDW., Esq., 14, Old Jewry Chambers.
LEFROY, G. B., Esq., 5, Robert Street, Adelphi.
LOCKE, JOHN, Esq., Q.C., M.P., Temple.
LOFTUS, THOMAS, Esq., New Inn.
LUCAS, CHARLES RODE, Esq., Lincoln's Inn.
STEWARD, SAMUEL, Esq., Lincoln's Inn Fields.
STILL, ROBERT, Esq., Lincoln's Inn.
TILLEARD, JOHN, Esq., Old Jewry.
VIZARD, WILLIAM, Esq., 55, Lincoln's Inn Fields.
WARTER, H. D., Esq., Longden Manor, nr. Shrewsbury.
WHITE, THOMAS, Esq., Bedford Row.

Auditors.

PHILIP ROBERTS, Esq., South Square, Gray's Inn.
J. W. TAYLOR, Esq., Great James St., Bedford Row.
JOSIAH T. PAUL, Esq., Tetbury.
STERLING WESTHORP, Esq., Ipswich.

Physician—H. PITMAN, M.D., 28, Gordon Square.
Solicitor—H. H. BURNE, Esq., 37, Lincoln's Inn Fields.
Bankers—UNION BANK OF LONDON (Temple Bar Branch).
Actuary & Secretary—A. DAY, Esq.

The Society commenced business in the year 1846.

On the 31st December, 1868,—

The total amount of existing Assurances was	£2,600,000
The Society's Investments amounted to	500,609
The Annual Premium Income in 1868 was	77,237
The total Income was	97,500
The Expenses of Management were	3,478
The Premiums on New Assurances were	10,067

From the above statement it appears that, after the operations of 23 years only, the Society had in hand assets amounting to nearly 20 per cent. of the existing Assurances,—an amount equivalent to 6¼ years' purchase of the present Annual Premiums: the expenses of management being 3½ per cent. only on the total income.

FOUR-FIFTHS OF THE PROFITS divided amongst the Assured every Five Years. Persons insured Two Years, dying before the division, share in Profits.

The Reversionary Bonuses added to the Policies in this Society have amounted, on the average, to Two per cent. per Annum on the sum assured.

PELICAN LIFE INSURANCE COMPANY.

ESTABLISHED IN 1797.

70, Lombard St., City, and 57, Charing Cross, Westminster.

DIRECTORS.

HENRY R. BRAND, Esq., M.P.	KIRKMAN D. HODGSON, Esq.
OCTAVIUS E. COOPE, Esq.	HENRY LANCELOT HOLLAND, Esq.
JOHN COOPE DAVIS, Esq.	SIR JOHN LUBBOCK, Bart., F.R.S.
HENRY FARQUHAR, Esq.	JOHN STEWART OXLEY, Esq.
CHARLES EMANUEL GOODHART, Esq.	BENJAMIN SHAW, Esq.
JAS. A. GORDON, Esq., M.D., F.R.S.	MARMADUKE WYVILL, Jun., Esq.

FINANCIAL POSITION.

Total Amount Insured with Bonus Additions		£3,007,431
Liability on the same at 3 per cent. Interest		846,712
Accumulated Funds		1,227,253
Annual Revenue from Premiums	£92,787	
„ „ from Interest	57,163	
		149,950

The whole invested in Government, Real, and other first-class Securities, in addition to which the assured have the guarantee of a large and wealthy proprietary.

For Prospectuses and Forms of Proposal apply at the Offices as above, or to the Agents of the Company.

ROBERT TUCKER, *Secretary and Actuary.*

ROCK LIFE ASSURANCE COMPANY.

ESTABLISHED A.D. 1806.

No. 15, NEW BRIDGE ST., BLACKFRIARS, LONDON, E.C.

DIRECTORS.

G. P. BIDDER, Esq.	Lieut.-Gen. Sir G. St. P. LAWRENCE, K.C.S.I., C.B.
J. G. DODSON, Esq., M.P.	C. T. LUCAS, Esq.
D. A. FREEMAN, Esq.	J. D. MAGENS, Esq.
G. A. FULLER, Esq.	C. RIVAZ, Esq.
J. GODDARD, Esq.	W. B. TOWSE, Esq.
R. HUDSON, Esq., F.R.S.	S. H. TWINING, Esq.
S. LAURENCE, Esq.	
T. H. LONGDEN, Esq.	

The **ROCK LIFE ASSURANCE COMPANY,** which has been established upwards of **Half a Century,** has an **Accumulated Fund** of more than **Three Millions Sterling,** invested in Mortgages on Land, and other first-class Securities:—

	£	s.	d.
Viz., on the 20th August, 1868	3,172,604	15	8
Sum Assured—Inclusive of Bonus Additions—at that date	5,380,750	2	11
Estimated Liability thereon (Northampton Table of Mortality, 3 per Cent. Interest)	1,481,569	0	4
That is less than one-half the Fund invested.			
Total Amount of Bonus Additions made to Policies	2,895,059	19	9
Amount of Profits divided for the Seven Years ending 20th August, 1868	532,369	7	8
Annual Income	314,867	14	3
Total Claims paid—Inclusive of Bonus Additions	6,627,044	7	7

Copies of the Annual Reports and Balance Sheets, as well as of the Periodical Valuation Accounts, Tables of Rates, and every information to be obtained on application.

JOHN RAYDEN, *Actuary.*
H. W. PORTER, *Sub-Actuary.*

ROYAL EXCHANGE ASSURANCE CORPORATION.

Established A.D. 1720, by Charter of King George the First, and confirmed by Special Acts of Parliament.

CHIEF OFFICE, ROYAL EXCHANGE, LONDON; BRANCH, 29, PALL MALL.

OCTAVIUS WIGRAM, Esq., *Governor.* JAMES STEWART HODGSON, Esq., *Sub-Governor.*

CHARLES JOHN MANNING, Esq., *Deputy-Governor.*

Directors.

ROBERT BARCLAY, Esq.
JOHN GARRATT CATTLEY, Esq.
MARK CURRIE CLOSE, Esq.
EDWARD JAMES DANIELL, Esq.
WILLIAM DAVIDSON, Esq.
LANCELOT WILLIAM DENT, Esq.
ALEXANDER DRUCE, Esq.
FREDERICK JOSEPH EDLMANN, Esq.
CHARLES HERMANN GOSCHEN, Esq.
RIVERSDALE WILLIAM GRENFELL, Esq.
FRANCIS ALEX. HAMILTON, Esq.
ROBERT AMADEUS HEATH, Esq.
WILLIAM TETLOW HIBBERT, Esq.
WILMOT HOLLAND, Esq.
EGERTON HUBBARD, Esq.
NEVILE LUBBOCK, Esq.
GEORGE FORBES MALCOLMSON, Esq.
LORD JOSCELINE WM. PERCY.
CHARLES ROBINSON, Esq.
SAMUEL LEO SCHUSTER, Esq.
ERIC CARRINGTON SMITH, Esq.
JOSEPH SOMES, Esq.
WILLIAM WALLACE, Esq.
CHARLES BARING YOUNG, Esq.

Medical Referee—SAMUEL SOLLY, Esq., F.R.S.

FIRE, LIFE, and MARINE ASSURANCES on Liberal Terms.

FIRE DUTY.—This Tax having been abolished, the PREMIUM is NOW the only charge for FIRE INSURANCES.

Life Assurances with or without participation in Profits.

Divisions of Profit every **Five Years.**

Any sum up to £15,000 insurable on the same Life.

The Corporation bear the cost of Policy Stamps and Medical Fees.

A liberal participation in Profits, with the guarantee of a large invested Capital-Stock, and exemption, under Royal Charter, from the Liabilities of Partnership.

The advantages of modern practice, with the security of an Office whose resources have been tested by the experience of **nearly a Century and a half.**

A Prospectus and Table of Bonus will be forwarded on application.

ROBERT P. STEELE, *Secretary.*

The Reversionary Bonus on British Policies has averaged nearly 2 *per cent. per annum* upon the sum assured.

MUTUAL LIFE ASSURANCE.

SCOTTISH PROVIDENT INSTITUTION.

EDINBURGH—6, ST. ANDREW SQUARE.
LONDON—18, KING WILLIAM STREET, E.C.

In this Society alone, Members can assure with right to Share in Whole Profits at Moderate Premiums.

In other offices they may assure at rates as low, but without any prospect of additions; or they may obtain the right to profits, but only by payment of excessive rates.

TRANSFER OF ASSURANCES.

From its very Moderate Rates this Society is peculiarly suited to the case of those who may have reasons for discontinuing their policies and assuring afresh in an office of undoubted stability. Even after several years this may be effected without much (if any) pecuniary loss.

REALISED FUNDS, from accumulation of Premiums alone, above £1,500,000—the increase in 1868 being no less than £133,000.

SUBSISTING ASSURANCES, £6,500,000.

For full Information as to INVESTMENTS see the Annual Reports, of which copies may be had on application.

The "Insurance Register" (Kent and Co., London) gives inquirers the means of judging as to the FINANCIAL POSITION *of the various offices. The facts there brought together show that no office gives evidences of greater progress or stability than the* SCOTTISH PROVIDENT INSTITUTION.

NATIONAL LIFE ASSURANCE SOCIETY,

2, KING WILLIAM STREET, LONDON, E.C.

ESTABLISHED 1830.

Directors.

President—JAMES BOGLE SMITH, Esq. *Vice-President*—RALPH RICARDO, Esq.

GEORGE BURNAND, Esq. | GEORGE NICHOLAS, Esq.
JOSEPH COLLING, Esq. | HENRY POLLOCK, Esq.
THOMAS CURTIS, Esq. | SIGISMUND RUCKER, Esq.
THOMAS HENRY DAKYNS, Esq. | HENRY SEWELL, Esq.
RICHARD GARTH, Esq., Q.C. | Hon. GERALD C. TALBOT.

Auditors.

LEWIS C. BERGER, Esq. | JOHN CARLYON HUGHES, Esq. | WM. JOHN WHYTE, Esq.

Medical Officers—HERBERT DAVIES, M.D., 23, Finsbury Square; J. SCOTT, M.D., 8, Chandos Street, Cavendish Square.

Bankers—Messrs. ROBARTS, LUBBOCK, and Co.

Solicitors—Messrs. WILDE, HUMPHRY, WILDE, and BERGER.

Actuary—CHARLES ANSELL, Jun., Esq.

THIS MUTUAL SOCIETY divides its profits every year, and all Members' Policies upon which Five full Yearly Premiums have been paid are entitled to participate therein, either by a reduction of the Premium for the current year, or by an equivalent Reversionary Addition to the Sum Assured.

The Reduction in Members' Premiums for the Year ending 24th March, 1870, is at the rate of £45 per cent.; a Premium of £50 per annum is thus reduced to £27 10s. for the current Year.

November, 1869. FREDERICK LOCK, *Manager and Secretary*.

THE NATIONAL REVERSIONARY INVESTMENT COMPANY,

INSTITUTED 1837,

For the Purchase of Absolute or Contingent Reversions, Life Interests, and Policies of Assurance on Lives.

OFFICE—No. 63, OLD BROAD STREET, LONDON, E.C.

JOHN PEMBERTON HEYWOOD, Esq.—*Chairman.*
EDWIN WARD SCADDING, Esq.—*Deputy-Chairman.*

Forms for submitting Proposals for Sale may be obtained at the Offices of the Company. G. A. RENDALL, *Secretary.*

ROBERT COCKS and CO.'S NEW MUSIC.

HAMILTON'S MODERN INSTRUCTIONS for the PIANO. 702nd Edition. 70 large folio pages. 4*s*. Order of all musicsellers and booksellers, and of the publishers.

CLARKE'S CATECHISM of the RUDIMENTS of MUSIC. 125th Edition. Free by post 13 stamps. "Every child learning music should have this book."—*Morning Chronicle.*

THE HOLY FAMILY: Sacred Pieces by the most celebrated Composers. Arranged by W. H. CALLCOTT. Piano solos, 12 books, each 5*s*. The same, as piano duets, 6*s*. each. Flute, violin, and violoncello accompaniments, each 1*s*. All at half price, with an extra stamp for postage.

To all Teachers of Music.—Robert Cocks and Co.'s Green Catalogue of Popular Pianoforte and Vocal Music. Latest Addenda gratis and post free.

LONDON: NEW BURLINGTON STREET.

NEW WORKS NOW READY.

AUSTIN'S LECTURES ON JURISPRUDENCE: or, The Philosophy of Positive Law. *Revised Edition.* By ROBERT CAMPBELL. 2 vols. 8vo. 32*s.*

RESEARCHES IN THE HIGHLANDS OF TURKEY. In parts little visited of Albania, Montenegro, &c. With Notes on the Classical Superstitions of the Modern Greek. By Rev. H. F. TOZER, M.A. With Map and Illustrations. 2 vols. Crown 8vo. 24*s.*

A SMALLER HISTORY OF ENGLISH LITERATURE, with SPECIMENS from the Chief Writers, arranged Chronologically, from the Earliest Times to the end of the Georgian era. Edited by WILLIAM SMITH, LL.D. 2 vols., 16mo. 3*s.* 6*d.* each.

THE NORTHERN CATHEDRALS OF ENGLAND, including YORK, RIPON, DURHAM, CARLISLE, CHESTER, and MANCHESTER. By R. J. KING, B.A. With 60 Illustrations. 2 vols. Crown 8vo. 21*s.*

THE ROYAL ENGINEER AND THE ROYAL ESTABLISHMENTS AT WOOLWICH and CHATHAM. By the Right Hon. Sir FRANCIS B. HEAD, Bart. With Illustrations. 8vo. 12*s.*

MOLECULAR AND MICROSCOPIC SCIENCE. By MARY SOMERVILLE. With 180 Illustrations. 2 vols. Post 8vo. 21*s.*

A MEMOIR OF JOHN CONOLLY, M.D., D.C.L., comprising a Sketch of the Improved Treatment of the Insane in Europe and America. By Sir JAMES CLARK, Bart., K.C.B., M.D., F.R.S. With a Portrait. Post 8vo. 10*s.* 6*d.*

THE PARKS, PROMENADES, AND GARDENS OF PARIS; described and considered in relation to the wants of our Own Cities, and of Public and Private Gardens. By W. ROBINSON, F.L.S. With 400 Illustrations. 8vo. 18*s.*

NAPOLEON AT FONTAINEBLEAU AND ELBA. Being a Journal of Occurrences and Notes of Conversations, &c. By the late Major-General Sir NEIL CAMPBELL, C.B. Portrait. 8vo. 15*s.*

CONSTITUTIONAL PROGRESS. A Series of University Lectures at Oxford. By Professor BURROWS, M.A. Post 8vo. 6*s.* 6*d.*

ANNALS OF ST. PAUL'S CATHEDRAL. By HENRY HART MILMAN, D.D., late Dean of St. Paul's. *Second Edition.* Portrait and Illustrations. 8vo. 18*s.*

THE CONTINUITY OF SCRIPTURE, as declared by the Testimony of our Lord and of the Evangelists and Apostles. By Lord HATHERLEY. *Fourth Edition.* Post 8vo. 6*s.*

[*Continued.*

NEW WORKS NOW READY—*continued.*

LIVES OF LORD LYNDHURST AND LORD BROUGHAM. By the late Lord CAMPBELL. 8vo. 16*s.*

THE WARRIORS OF THE 17TH CENTURY WHO HAVE COMMANDED FLEETS AND ARMIES BEFORE THE ENEMY. By Gen. Sir EDWARD CUST, D.C.L. 2 vols. Post 8vo. 18*s.*

TRAVELS AND ADVENTURES IN RUSSIAN AMERICA. By FREDERICK WHYMPER. Map and Illustrations. 8vo. 16*s.*

THE MILITARY FORCES OF THE CROWN; their Administration and Government. By CHARLES M. CLODE. 2 vols. 8vo. 42*s.*

THE BRITISH MISSION TO ABYSSINIA. With Notices of the Countries traversed from Massowah, through the Soodan, and back to Annesley Bay, from Magdala. By HORMUZD RASSAM. Map and Illustrations. 2 vols. 8vo. 28*s.*

REMINISCENCES OF ATHENS AND THE MOREA during Travels in Greece, in 1839. By the late EARL OF CARNARVON. Edited by the present Earl. With Map. Crown 8vo. 7*s.* 6*d.*

THE NILE AND ITS BANKS, showing their attractions to the Archæologist, Naturalist, and General Tourist. By Rev. A. C. SMITH. Woodcuts. 2 vols. Post 8vo. 18*s.*

A RESIDENCE IN BULGARIA; or, Notes on the Resources and Administration of Turkey, the Condition and Character of the Christian and Mussulman Populations. By Capt. ST. CLAIR and C. A. BROPHY. 8vo. 12*s.*

TRAVELS IN THE EASTERN ARCHIPELAGO, 1865–6. A Popular Description of the Islands, their Natural History and Geography. By ALBERT S. BICKMORE, F.R.G.S. With Map and Illustrations. 8vo. 21*s.*

SHIPBUILDING IN IRON AND STEEL; a Practical Treatise giving Full Details of Construction, Processes of Manufacture and Building Arrangements. By E. J. REED, C.B. With 5 Plans and 250 Woodcuts. 8vo. 30*s.*

PRINCIPLES AT STAKE: a Series of Essays on Church Questions of the Day. By various Authors. Edited by G. H. SUMNER, M.A. *Second Edition.* 8vo. 12*s.*

THE STRENGTH OF IRON AND STEEL. By KNUTT STYFFE, Director of the Institute at Stockholm. With Plates. 8vo. 12*s.*

LAST WINTER IN THE UNITED STATES. By Rev. F. BARHAM ZINCKE. Post 8vo. 10*s.* 6*d.*

JOHN MURRAY, ALBEMARLE STREET.

JOHNSON'S DICTIONARY BY DR. R. G. LATHAM.

NOW READY,

Complete in FOUR VOLUMES, *4to. Price £7, bound in cloth and lettered,*

A DICTIONARY

OF

THE ENGLISH LANGUAGE.

BY

ROBERT GORDON LATHAM, M.A., M.D., F.R.S., &c.

Late Fellow of King's College, Cambridge; late Professor of English, University College, London; Author of 'The English Language,' etc.

FOUNDED ON THAT OF DR. SAMUEL JOHNSON, AS EDITED BY THE REV. H. J. TODD, M.A.

WITH NUMEROUS EMENDATIONS AND ADDITIONS.

'Dr. LATHAM's work is not only an English Dictionary in the strict meaning of the term, but in many important respects a very valuable addition to our national lexicography. Though nominally based on JOHNSON's Dictionary, so much of the original text is discarded as imperfect or erroneous, and the additions in every department are so numerous and extensive, that it may be regarded virtually as a new book. Still, while thus amplifying and improving the original work until its form can no longer be recognised, Dr. LATHAM remains faithful in the main to its general spirit and plan, and his new Dictionary may fairly be said to possess many of the characteristic excellencies and defects of the old. . . . The Dictionary deserves to be studied by every one interested in the language, and as a book of reference is admirably fitted for general usefulness.'—*Edinburgh Review.*

'This Dictionary maintains its character as the most complete and able work of the kind published in this country. As an ordinary book of reference it fulfils all the requisite functions of a lexicon; but to the student and the scholar its great value lies in the philosophical dissertations on the logical value of words, and the vast amount of care and learning with which the derivations are exemplified. To those who take an interest in the science of the filiation of languages the importance of a dictionary on so comprehensive a plan cannot be overrated.'—*Morning Star.*

'The special excellence of the present over all previous editions will be found, no doubt, in the etymological department, which replaces the incorrect and often fanciful derivations of Dr. JOHNSON's day with the more accurate conclusions, especially in the derivations from Teutonic and Scandinavian roots, to which the best modern philologists have advanced their knowledge. It also replenishes the vocabulary with newly-coined and technical words which have lately come into fashion; and revises and fortifies the original authorities with examples from more recent and living writers. In most instances, too, the exact reference is added to the extracts quoted. The Editor's explanatory preface is very interesting and instructive.'—*John Bull.*

LONDON: Longmans and Co.; W. Allan and Co.; Aylott and Co.; Bickers and Son; W. and T. Boone; L. Booth; T. Bosworth; E. Bumpus; S. Capes; J. Cornish; Hatchard and Co.; J. Hearne; E. Hodgson; Houlston and Wright; J. Murray; D. Nutt; Richardson and Co.; J. and F. H. Rivington; Smith, Elder, and Co.; Stevens and Sons; Whittaker and Co.; Willis and Sotheran; G. R. Wright.

EDINBURGH: Maclachlan and Stewart.

Editions adapted for the Knapsack or Travelling Bag, appropriate for Reading in the Holidays.

THE STUDENT'S EDITION:—

LORD MACAULAY'S CRITICAL AND HISTORICAL ESSAYS. Contributed to the "Edinburgh Review." New edition, complete in one volume. Crown 8vo., price 6*s.* cloth. 12*s.* in tree-calf; or 15*s.* morocco, gilt edges (*bound by Rivière*).

Also, uniform with the above:—

THE REV. SYDNEY SMITH'S MISCELLANEOUS WORKS, including his contributions to the "Edinburgh Review." New Edition, complete in one volume. Crown 8vo., price 6*s.* cloth; or 12*s.* bound in tree-calf by Rivière.

THE LIFE AND LETTERS OF THE REV. SYDNEY SMITH. Edited by his Daughter, Lady HOLLAND, and Mrs. AUSTIN. New edition, complete in one volume. Crown 8vo., price 6*s.* cloth; or 12*s.* bound in tree-calf by Rivière.

THE WIT AND WISDOM OF THE REV. SYDNEY SMITH; a Selection of the most memorable Passages in his Written Works, Letters, and Conversation. New Edition. Crown 8vo., price 3*s.* 6*d.* cloth.

London: LONGMANS, GREEN, & Co., Paternoster Row.

WORKS RECENTLY PUBLISHED BY

WILLIAM RIDGWAY, 169, PICCADILLY, W.

I.

THE CHARGE OF THE LORD CHIEF JUSTICE of England, in the case of the Queen against Nelson and Brand. One volume, 8vo., price 4*s.*

II.

NATIONALITY; OR, THE LAW RELATING TO Subjects and Aliens. By the Right Hon. Sir ALEXANDER COCKBURN, Lord Chief Justice of England. One vol., 8vo., price 5*s.*

III.

SINCLAIR ON GRASSES; a new and cheaper edition, in one volume, 8vo., with forty-five plates, price 15*s.*

IV.

PICTURES OF HUNGARIAN LIFE; a Handbook for Travellers in Western Hungary. By the Author of "Gheel," &c. One volume, crown 8vo., price 10*s.* 6*d.* Illustrated by the Author.

V.

GARDENING FOR THE COTTAGE. By S. WOOD. Price One Shilling.

WILLIAM RIDGWAY, 169, PICCADILLY, W.,
AND ALL BOOKSELLERS.

LIST OF THE

ALMANACS

FOR THE YEAR 1870,

PRINTED FOR THE

COMPANY OF STATIONERS.

MOORE'S ALMANAC.

This very popular Almanac, which, besides the usual Calendar, contains a fuller account of the Eclipses and Astronomical phenomena of the Year than any publication of its class, was lately increased by several pages, giving Lists of the Members of the Government, the Houses of Parliament, and other useful information, to which is this year added a half-sheet containing a List of the Principal Fairs in England. Price 6*d*.

GOLDSMITH'S ALMANAC.

Elegant, useful, and portable, it is essentially adapted for the pocket, not only from its miniature size, but from its containing a vast amount of useful and valuable matter for occasional reference. Price 6*d*.

It is kept by all Booksellers in a variety of bindings, for Presents.

LADY'S AND GENTLEMAN'S DIARY.

Adapted, as its name imports, to both sexes, containing Papers and Questions contributed by some of the first mathematicians of the day, as well as Enigmas and Charades for the amusement of the curious in those matters, was lately increased by an additional sheet, giving Lists of the Members of the Government, the Houses of Parliament, and other useful information. Price 1*s*. 4*d*.

GILBERT'S CLERGYMAN'S ALMANAC AND WHITAKER'S CLERGYMAN'S DIARY, in cloth.

This Almanac contains a complete Calendar of the Festivals, &c., of the Church of England, with the Lessons appointed for every day in the year; a Diary of 90 pages for Memoranda; a complete List of the Dignified Clergy of each Diocese in England, Wales, Ireland, and the Colonies, with the official Armorial Bearings of each Archbishop and Bishop; a List of the Incumbents of London and of parishes within ten miles of London; of the officials of the Universities and Public Schools; of the Head Masters of Endowed Grammar Schools; a very complete Peerage, and other information interesting to the Clergy and Laity of England. Price 2*s*. 6*d*.

This Almanac, as well as the following, is to be procured in various bindings.

CLERICAL ALMANAC.

NOW CONSIDERABLY ENLARGED AND IMPROVED, contains, besides the customary contents of an Almanac, proper Lessons for every day in the year; Transfer Days at the Bank, &c.; Universities of Oxford, Cambridge, and London; Archbishops, Bishops, Deans, Archdeacons, Queen's Chaplains, &c.; Alphabetical Lists of the English, Scotch, and Irish Nobility, with their surnames; Epitome of Assessed Taxes, Stamp and Legacy Duties, &c. Price 9*d*.

BRITISH ALMANAC AND COMPANION.

In cloth. Price 4*s*.

THE BRITISH ALMANAC.

Containing the Calendar of Remarkable Days and Terms; Monthly Notices; Sunday Lessons; Meteorological Tables and Remarks; Astronomical Facts and Phenomena; Tables of the Sun, Moon, and Tides; with a Miscellaneous Register of Information connected with Government, Legislation, Commerce, and Education; and various useful Tables. Price 1*s*.

COMPANION TO THE ALMANAC.

A Year-Book of General Information for 1870 on Subjects connected with Mathematics, Geography, Fine Arts, Political Economy, Public Improvements, Legislation, Statistics, &c. Price 2*s.* 6*d.*

JOHN PARTRIDGE'S ALMANAC.

Devoted to an account of the Eclipses, movements of the Planets, Astronomical, Tide and other Tables, with an additional sheet, giving Lists of the Members of the Government, the Houses of Parliament, and other useful information. Price 9*d.*

STATIONERS' COMPANY'S SHEET ALMANAC.

On super-royal paper, equally adapted for the Counting-house and the Library, containing Lists of the chief Officers of State, Judges, Public Offices, London Bankers and Insurance Offices, with very copious Postal Information, is embellished with a VIEW OF DUBLIN FROM THE PARK. Price 2*s.* Proof Impressions of the Plate on thick paper may be had at 3*s.* each.

LONDON SHEET ALMANAC.

On thick drawing paper for the table. This elegant and unique little Almanac, containing much information, is also printed on a thin paper, to adapt it for binding in a variety of styles suited to all tastes and fancies. It is this year ornamented with a VIEW OF THE NEW METROPOLITAN MEAT MARKET. Price 6*d.*

WING'S SHEET ALMANAC.

A very useful Office and Counting-house Companion, printed in Black and Red. Price 6*d.*

VESTRY ALMANAC.

For Ecclesiastical and Parochial Purposes, printed on a large sheet; is intended to assist the CLERGY with reference to various periodical returns required of them, as well as to convey much useful information to Parochial Officers, Parish Clerks, and others. Price 6*d.*

COUNTY ALMANACS,

(PRICE SIXPENCE EACH),

With various useful TABLES, particularly adapted to each County, viz.:

Middlesex, Hertfordshire, Essex, Kent, Surrey, and Sussex.

Cornwall, Devonshire, Somersetshire, and Dorsetshire.

Gloucestershire, Worcestershire, Herefordshire, Monmouthshire, and South Wales.

Norfolk, Suffolk, Cambridgeshire, Ely, Huntingdonshire, and Bedfordshire.

Warwickshire, Northamptonshire, Leicestershire, Rutlandshire, Lincolnshire, Nottinghamshire, and Derbyshire.

Cheshire, Lancashire, Shropshire, Staffordshire, and North Wales.

Wiltshire, Hampshire, Oxfordshire, Berkshire, and Buckinghamshire.

Yorkshire, Durham, Northumberland, Westmoreland, and Cumberland

---

The STATIONERS' COMPANY'S ALMANACS are distinguished by *the Arms of the Company*, and by the words,—

"Printed for the COMPANY OF STATIONERS,

"And sold by JOSEPH GREENHILL, at their HALL,

"LUDGATE HILL, LONDON."

"Good words are worth much and cost little."—HERBERT.

Sixpence Monthly, Illustrated.

GOOD WORDS.

EDITED BY NORMAN MACLEOD, D.D.,

ONE OF HER MAJESTY'S CHAPLAINS.

ARRANGEMENTS FOR 1870.

The Publishers beg to announce that they have made arrangements for the following important Works appearing in GOOD WORDS next year:

I.

DAYS IN UPPER INDIA.

By NORMAN MACLEOD, D.D.

To be begun in January, and continued throughout the Year.

II.

FERNYHURST COURT.

A New One Volume Story.

By the Author of 'Stone Edge.'

To be begun in May, and continued till completed.

III.

VISITS to the VAUDOIS and the CAMISARDS.

By S. SMILES, Author of 'Self Help.'

To be begun in January, and continued throughout the Year.

IV.

A SERIES OF TWELVE PAPERS.

By the Rev. W. FLEMING STEVENSON, Author of 'Praying and Working.'

To be begun in January, and continued throughout the Year.

V.

'GOOD WORDS' LECTURES IN SCIENCE.

By Eminent Authors.

To be begun in January, and continued throughout the Year.

VI.

DOROTHY FOX.

A New Three Volume Story.

By the Author of 'How it all Happened.'

To be begun in January, and continued throughout the Year.

VII.

WORKING PEOPLE, and How they Live.

By 'GOOD WORDS' COMMISSIONER.

To be begun in January, and continued throughout the Year.

VIII.

CARLINO.

A New One Volume Story.

By the Author of 'Doctor Antonio.'

To be begun in January, and continued till completed.

IX.

LETTERS FROM THE TROPICS.

By CHARLES KINGSLEY, Author of 'Westward, Ho!'

To be begun in March, and continued till the end of the Year.

In addition to the above, there will also be Contributions by many of the other Authors whose contributions have raised 'GOOD WORDS' to its high position.

STRAHAN & CO., PUBLISHERS.

LIST OF WORKS

ON

ASSURANCE (LIFE, FIRE, AND MARINE), ANNUITIES FRIENDLY AND BUILDING SOCIETIES, &c.,

PUBLISHED BY

CHARLES AND EDWIN LAYTON,

Booksellers and Printers,

FLEET STREET AND GOUGH SQUARE, LONDON.

RICHARD ATKINS (of the Sun Fire Office).

THE AVERAGE CLAUSE. Hints on the Settlement of Claims for Losses by Fire under Mercantile Policies. Crown 8vo., pp. 108, cloth, 5*s*.

W. DOWNING BIDEN, F.G.S.

I.

RULES, FORMULÆ, AND TABLES FOR THE VALUATION OF ESTATES, whether Freehold, Copyhold, or Leasehold, in Possession or in Reversion, and dependent on Terms of certain duration or on a Life or Lives; with New Rules and Tables for ascertaining the correct market value or fair price to be given for Annuities, Reversions, Advowsons, and Next Presentations, in order to secure to the purchaser a certain rate of interest on equitable terms; and a Set of Conversion Tables, for ascertaining from the price of an Annuity the cost of a Reversion, to allow the purchaser a given rate of interest with security. *Second Edition.* Demy 8vo., cloth, 12*s*.

II.

PRACTICAL RULES FOR VALUERS, with Notes on the Valuation of Freeholds, Leaseholds for Lives or for Years, Copyholds, Advowsons, and Next Presentations; also on Claims for Compensation for Property taken or damaged by the Construction of Railways or other Public Works. *Third Edition.* Fcap. 8vo., sewn, 1*s*. 6*d*.

MORRICE A. BLACK.

I.

A CHRONOLOGICAL AND STATISTICAL CHART OF THE LIFE ASSURANCE ASSOCIATIONS ESTABLISHED IN THE UNITED KINGDOM, from 1706 to 1863; showing where they were and how they disappeared. Mounted in cloth case. 16*s*.; or on Roller, 21*s*.

II.

AN ANALYSIS OF MARINE INSURANCE COMPANIES' ACCOUNTS, showing the Losses, Liabilities, and Assets; together with a Table illustrating the combined experience of Twelve Offices. Demy 8vo. sewn, pp. 24. 3*s*. 6*d*.

WILLIAM BRINTON, M.D. (The Late).

ON THE MEDICAL SELECTION OF LIVES FOR ASSURANCE. Fourth Edition. By Dr. Harley. Fcap. 8vo. cloth, 2*s*.

CHARLES JOHN BUNYON, M.A. (Barrister-at-Law).

I.

THE LAW OF FIRE INSURANCE. 8vo. cloth, pp. 291, 16*s*.

II.

THE LAW OF LIFE ASSURANCE, including the Formation, Constitution, and Amalgamation of Assurance Companies, Assignments and Equitable Liens arising in connection with Life Policies, and an Introductory Chapter on the Amendment of the Law. Second Edition. Demy 8vo. cloth, pp. 606, 30*s*.

[*Continued.*

LAYTONS' LIST OF WORKS—*continued.*

DAVID CHISHOLM.

COMMUTATION TABLES; for Joint Annuities and Survivorship Assurances, for every Combination of Two Lives, according to Carlisle Mortality at 3, 3½, 4, 5, and 6 per Cent. Interest; with Tables of Annuities and Assurances on Single Lives, and other useful Tables. 2 vols. super royal 8vo., *4l. 4s.*

GRIFFITH DAVIES, F.R.S.,

Late Actuary to the Guardian Assurance Company, and to the Reversionary Interest Society.

TREATISE ON ANNUITIES, with numerous Tables based on the Experience of the Equitable Society and on the Northampton Rate of Mortality. Demy 8vo., boards, *1l. 6s.*

OLINTHUS GREGORY DOWNES, F.R.A.S.

TRANSLATION OF QUETELET'S LETTERS ON THE THEORY OF PROBABILITIES, as applied to the Moral and Political Sciences. 8vo., cloth, *12s.*

LARGE OR SMALL PARCELS OF BOOKS PURCHASED OR TAKEN IN EXCHANGE.

Complete Catalogue to be had Post-free on application.

London: CHARLES & EDWIN LAYTON, 150, Fleet Street.

Just Published, in 8vo., price *18s.*,

THE ANNUAL REGISTER;

A Review of Public Events at Home and Abroad, for the Year 1868; being the Sixth Volume of an improved Series.

The Volumes for 1863 to 1867 are still to be had, price *18s.* each.

LONDON: RIVINGTONS, WATERLOO PLACE;

AND THE OTHER PROPRIETORS.

DR. ROBERTS'S CELEBRATED OINTMENT, called

"THE POOR MAN'S FRIEND,"

Is confidently recommended to the public as an unfailing remedy for wounds of every description; a certain remedy for ulcerated sore legs, burns, scalds, bruises, chilblains, scorbutic eruptions, and pimples in the face, sore and inflamed eyes, sore heads, sore breasts, piles, &c. Sold in pots 13½*d.*, *2s.* 9*d.*, *4s.* 6*d.*, *11s.*, and *22s.* each.—And his

PILULÆ ANTI-SCROPHULÆ, OR ALTERATIVE PILLS,

Proved by sixty years' experience to be one of the best alterative medicines for purifying the blood and assisting nature in her operations. They form a mild and superior family aperient, that may be taken at all times without confinement or change of diet. Sold at 13½*d.*, *2s.* 9*d.*, *4s.* 6*d.*, *11s.*, and *22s.* each.

PREPARED ONLY BY

BEACH & BARNICOTT, Bridport, Dorset,

AND SOLD BY ALL MEDICINE VENDORS.

BOND'S GENUINE INDELIBLE MARKING INK,

Without preparation, which is warranted to possess the highest state of Chemical Durability: a perfect preventive from any loss of Wearing Apparel by fraud, mistake, or otherwise. In bottles *1s.* or *6d.* each; also in pedestal and flat cases, *1s.* or *6d.*

Manufactured and sold by H. BOND, Pharmaceutical Chemist, 11, Cross Street, Nile Street, Hoxton New Town. *Established* 1815. *A Liberal discount allowed to Wholesale Houses.*

C. & E. LAYTON, Wholesale Agents, Fleet Street, London.

24 DE 69

University Life Assurance Society,

25, PALL MALL, LONDON, S.W.

ESTABLISHED 1825. INCORPORATED BY ROYAL CHARTER.

Extension to Winchester, Eton, Harrow, Rugby, St. Paul's, Westminster, and other Foundation Schools.

PRESIDENT.

HIS GRACE ARCHIBALD CAMPBELL, LORD ARCHBISHOP OF CANTERBURY.

DIRECTORS.

JAMES ALDERSON, Esq., M.D.
HENRY NUGENT BANKES, Esq.
FRANCIS BARLOW, Esq.
Sir EDWARD M. BULLER, Bart., M.P.
Lord RICHARD CAVENDISH.
Sir ROBERT CHARLES DALLAS, Bart.
FRANCIS H. DICKINSON, Esq.
Sir FRANCIS H. DOYLE, Bart.
ROBERT HOOK, Esq.
ARTHUR THOMAS MALKIN, Esq.
The Rt. Rev. the Lord Bishop of WINCHESTER.
The Rt. Hon. Sir FREDERICK POLLOCK, Bart.
EDWARD ROMILLY, Esq.
The Most Hon. the Marquis of SALISBURY.
The Rt. Hon. SPENCER H. WALPOLE, M.P.
Sir THOMAS WATSON, Bart., M.D.
The Rt. Hon. JAMES STUART WORTLEY.
J. COPLEY WRAY, Esq. (*Chairman*).

Amount of Capital originally Subscribed **£600,000**, on which has been paid up	£30,000
Amount accumulated from Premiums	915,000
Annual Income	93,500
Amount of Policies in existence and Outstanding Additions upwards of	2,075,000

By which it is seen that this Society possesses ample means in proportion to its Liabilities.

The advantages of this Society are as follows:—

It is Incorporated by ROYAL CHARTER.

Assurances may be effected on the Lives of all persons who are, or have been, on the Books of a University, or educated at any College, Hall, Foundation School, or other Institution for the purposes of Education in the United Kingdom.

NINE-TENTHS of the PROFITS are appropriated to the Assured.

The Society is based *on a better principle* than that of a *Mutual Assurance Society*, as the Assured are *under no liability*; AND PARTICIPATE IN NEARLY ALL THE PROFITS.

A Division of Profits is made every five years.

THE ADDITIONS TO POLICIES FOR THE LAST FORTY YEARS HAVE BEEN AT THE RATE OF NEARLY 2 PER CENT. PER ANNUM.

In June, 1870, the NINTH QUINQUENNIAL DIVISION of Profits will be made.

Policies after Five Years' standing, receive Additions in the event of Death before the following Division of Profits, at the rate of 1¼ per cent. per annum.

Since the Establishment of the Society in 1825, the amount of Additions allotted to the Assured has exceeded £754,000.

The large amount of Profit proves the advantage derived from select lives.

From the institution of this Society to the present time no claim has been disputed.

The Fee to the Medical Referee is in each case paid by the Society.

No Charge for Policy Stamps.

Personal appearance at the Office is not required, except in particular cases.

Secretary—CHARLES McCABE, Esq.

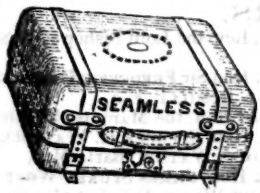
November, 1869. a

BY APPOINTMENT TO H.R.H. THE PRINCE OF WALES.

ALLEN'S PORTMANTEAUS

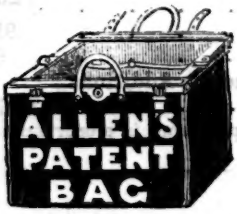
37, WEST STRAND, LONDON.

Illustrated Catalogues of 500 other Articles for Home or Continental Travelling, Post Free.



Patent Seamless Portmanteau. No edges to wear out.

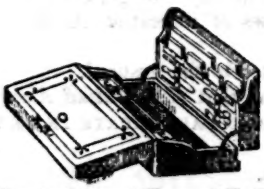
Ladies' Wardrobe Portmanteau.



Allen's Patent Square Mouth Bag.

No. 5032.

Despatch Box. Registered 1869.



Allen's Patent Despatch Box Desk.

Allen's New Dressing-Bag.

Also ALLEN'S BARRACK-FURNITURE CATALOGUE of Officers' Bedsteads, Drawers, Canteens, Easy Chairs, Wash-handstands, Overland Trunks, &c., Post Free.

PRIZE MEDAL AWARDED FOR GENERAL EXCELLENCE.

Seventh Annual Publication.

THE STATESMAN'S YEAR BOOK for 1870. By FREDERICK MARTIN. A Statistical, Mercantile, and Historical Account of the Civilised World for the Year 1870. Forming a Manual for Politicians and Merchants. Crown 8vo., 10*s.* 6*d.*

The New Edition is thoroughly revised and corrected to the present time from official communications received from the Governments of the different countries.

"Becomes year by year more valuable and indispensable."—*Times.*

ANNALS OF OUR TIME. A Diurnal of Events, Social and Political, which have happened in or had relation to the Kingdom of Great Britain, from the Accession of Queen Victoria to the opening of the Present Parliament. By JOSEPH IRVING. With Index and Table of Administrations. 8vo., half-bound, 18*s.* Second Edition.

"We have before us a trusty and ready guide to the events of the past thirty years, available equally for the statesman, the politician, the public writer, and the general reader."—*Times.*

THE RIGHT HON. W. E. GLADSTONE'S "JUVENTUS MUNDI." Gods and Men of the Heroic Age. With a Coloured Map of the Outer Geography of the Odyssey, and of the Form of the Earth according to Homer. Crown 8vo., 10*s.* 6*d.*

THE RIGHT HON. JOHN BRIGHT'S SPEECHES on QUESTIONS of PUBLIC POLICY. Edited by Professor ROGERS. Author's Popular Edition. Extra fcap., 8vo., 3*s.* 6*d.* Library Edition, 2 vols., 8vo., with Portrait. 25*s.*

HENRY CRABB ROBINSON'S DIARY, REMINISCENCES, and CORRESPONDENCE. Selected and Edited by Dr. T. SADLER. 3 vols. 8vo., with Portrait, 36*s.* Second Edition.

GREATER BRITAIN. By SIR C. W. DILKE, M.P. A Record of Travel in English-Speaking Countries (America, Australia, India) during 1866-7. With Illustrations. Fourth Edition, crown 8vo., 6*s.*

THE MALAY ARCHIPELAGO: the LAND of the ORANG-UTAN and the BIRD of PARADISE. A Narrative of Travel, with Studies of Man and Nature. By ALFRED RUSSELL WALLACE. 2 vols., crown 8vo., with 9 Maps and 50 Illustrations, 24*s.* Second Edition.

THE BRITISH EXPEDITION to ABYSSINIA. Compiled from Official and Authentic Documents. By Captain H. M. HOZIER, late Assistant Military Secretary to Lord Napier of Magdala. 8vo., 9*s.*

THE RUSSO-INDIAN QUESTION. Considered Historically, Strategically, and Politically; with a Sketch of Central Asiatic Politics and a Map of Central Asia. By CAPTAIN F. TRENCH, F.R.G.S., 20th Hussars. Crown 8vo., 7*s.* 6*d.*

"We recommend it to all who would with brief expenditure of time make themselves fairly acquainted with the 'Russo-Indian Question.'"—*United Service Magazine.*

LORD LIVERPOOL'S LIFE and ADMINISTRATION. Compiled from Original Documents. By Professor YONGE. With Portrait. 3 vols. 8vo., 42*s.*

THE LIFE of SIR WALTER RALEIGH. Together with his Letters, now first Collected. Based on Contemporary Documents. By EDWARD EDWARDS. With Portrait. 2 vols. 8vo., 32*s.*

MACMILLAN & CO., LONDON.

APPROVED FAMILY REQUISITES.

KEATING'S COUGH LOZENGES.

THE VAST INCREASE in the demand for these COUGH LOZENGES, and the numerous Testimonials constantly received, fully justify the Proprietor in asserting they are the best and safest yet offered to the Public for the Cure of the following Complaints:—ASTHMA, WINTER COUGH, HOARSENESS, SHORTNESS OF BREATH, and other PULMONARY MALADIES.

They have deservedly obtained the high patronage of their Majesties the King of Prussia and the King of Hanover; very many also of the Nobility and Clergy, and of the Public generally, use them, under the recommendation of some of the most eminent of the Faculty.

TESTIMONIAL.

Old Bank, Stratford-upon-Avon.

DEAR SIR,—Having had a severe Cough this winter I was advised to try your Lozenges, which are invaluable; having purchased one box costing *only* 1*s.* 1½*d.*, completely set me up, and must, therefore, strongly recommend them as a certain cure.

I remain, your most obedient Servant,

To Mr. KEATING, W. HORNIDGE, Manager.
79, St. Paul's Churchyard, London.

Prepared and sold in Boxes, 1*s.* 1½*d.*, and Tins, 2*s.* 9*d.*, 4*s.* 6*d.*, and 10*s.* 6*d.* each, by THOMAS KEATING, Chemist, 79, St. Paul's Churchyard, London, E.C. Sold Retail by all Druggists.

KEATING'S CHILDREN'S WORM TABLETS.

A purely Vegetable Sweetmeat both in appearance and taste, furnishing a most agreeable method of administering a well-known remedy for INTESTINAL OR THREAD WORMS.

It is a perfectly safe and mild preparation, and is especially adapted for Children, being as harmless in its action as it is prompt and certain in its effects; and may be taken with impunity by the most delicate constitution.

Prepared and Sold in Tins, 1*s.* 1½*d.* and 2*s.* 9*d.* each, by THOMAS KEATING, Chemist, 79, St. Paul's Churchyard, London, E.C.; and Retail by all Druggists.

KEATING'S INSECT-DESTROYING POWDER.

This Powder is quite *harmless to animal life*, but is unrivalled in destroying Fleas, Bugs, Emmets, Flies, Cockroaches, Beetles, Gnats, Mosquitoes, Moths in Furs, and every other species of Insects in all stages of metamorphosis.

SPORTSMEN will find this an invaluable remedy for destroying Fleas in their Dogs, as also *Ladies for their Pet Dogs*; and sprinkled about the nests of Poultry it will be found extremely efficacious in exterminating those Insects with which they are usually infested. It is perfectly harmless in its nature, and may be applied without any apprehension, AS IT HAS NO QUALITIES DELETERIOUS TO ANIMAL LIFE.

Sold in Packets, 1*s.*, Tins, 2*s.* 6*d.* and 4*s.* 6*d.* each.

Also in Bottles, 1*s.* 2*d.*, and with Bellows 1*s.* 6*d.*, and 3*s.* each, by

THOMAS KEATING,

CHEMIST, 79, ST. PAUL'S CHURCHYARD, LONDON, E.C.

WINTER COUGHS, COLDS, ASTHMA & INFLUENZA

ARE SPEEDILY CURED BY THE USE OF

SPENCER'S PULMONIC ELIXIR.

Prepared from the Recipe of the late C. Spencer, Esq., Surgeon, &c., Salford.

Deservedly celebrated as the most successful Practitioner in all Pulmonary Affections.

Prepared with great care by the Proprietors, T. ROBERTS & Co., 8, Crane Court, Fleet Street, London.—May be had of all Medicine Vendors in the Kingdom, in bottles at 1*s.* 1½*d.* and 2*s.* 9*d.* each.

THE WAY TO OBTAIN SOUND HEALTH.

1st. Cleanse the stomach from all offensive accumulations, which so usually produce functional derangement, vitiating the food.

2nd. Purify the blood from all acrid and corrupt humours, and you will remove the causes of the greatest mass of the diseases which afflict so many of the human family.

A REMEDY, proved by thirty years' experience, capable of effecting such a desirable and important purpose, is still before the public in

WHELPTON'S

VEGETABLE PURIFYING PILLS.

This famous Medicine has proved its value in diseases of the *Head, Chest, Bowels, Liver*, and *Digestive Organs, Kidneys, &c.*; also in *Rheumatism, Ulcers, Sores*, and *Skin Diseases*, it being a direct *Purifier* of the *Blood* and other fluids of the human body.

Prepared and Sold Wholesale and Retail in Boxes, price 7½*d.*, 1*s.* 1½*d.*, and 2*s.* 9*d.* each, by G. WHELPTON and SON, 3, Crane Court, Fleet Street, London. And may be had of all Chemists and Medicine Vendors. Sent post free on receipt of 8, 14, or 33 stamps.

Eleventh Edition, foolscap 2*s.* 6*d.* sewed; or 3*s.* cloth,

THE WATER CURE IN CHRONIC DISEASE:

An Exposition of the Causes, Progress, and Termination of various Chronic Diseases of the Digestive Organs, Lungs, Nerves, Limbs, and Skin; and of their Treatment by Water and other Hygienic Means. By JAMES MANBY GULLY, M.D., L.R.C.S., and F.R.P.S. Edinburgh, F.R.M.C.S. London, &c.

"Dr. Gully has published a large and elaborate work on the Water Cure, which is, we think, the best treatise on the subject that has yet appeared."—*Westminster Review.*

"Dr. Gully's book is evidently written by a well-educated medical man. This work is by far the most scientific that we have seen on hydropathy."—*Athenæum.*

"Of all the expositions which have been published respecting the Water Cure, this is the most tangible and complete."—*Literary Gazette.*

Also, foolscap, 2*s.* 6*d.* sewed; or 3*s.* cloth.

A GUIDE TO DOMESTIC HYDROTHERAPEIA:

The Water Cure in Acute Disease. By JAMES MANBY GULLY, M.D., &c. &c., Author of the "Water Cure in Chronic Disease."

LONDON: SIMPKIN, MARSHALL, & Co., Stationers'-Hall Court

LAMPLOUGH'S
EFFERVESCING
PYRETIC SALINE

Alleviates thirst in a most remarkable manner, restoring to Nature the loss she sustains from *malarial* and exhausting causes, furnishing the system with the elements found in the blood when in a healthy state. The necessity of keeping that fluid supplied with the stimulus which is the true cause of its action is most important and must be apparent to all.

In *Sickness*, *Headache*, or affections of the *Stomach* and *Liver*, one tea-spoonful should be taken in half a tumbler-glass of water twice or thrice daily.

In Cholera it has proved very successful. Out of 465 cases treated by the SALINE, in Cold-Bath Fields Prison, the astonishing number of 461 recovered. One tea-spoonful should be given in half a tumbler-glass of water, every twenty minutes until relieved. Attend most particularly to the printed instructions in the circular.

In SCARLET, TYPHUS, or YELLOW FEVERS, it should be given in tea-spoonful doses, every hour, in a tumbler of water. It is, by many of the most eminent medical practitioners, who use it both in their families and practice, considered a SPECIFIC, no other medicine being required. For Measles and other eruptive diseases, it should be given in tea-spoonful doses, every four hours, in half a glass of water, or with an increased quantity of water, if the patient suffers from thirst.

A draught, possessing great efficacy in Fevers, Gout, and affections of the Skin, is made by adding one tea-spoonful of the Pyretic Saline to a tumbler of water, in which a dessert-spoonful of Lime Juice Syrup has been put.

Prepared only by **HENRY LAMPLOUGH,** *at the Laboratory,*

113, HOLBORN HILL, LONDON, E.C.

(Two doors from Hatton Garden.)

KING'S COLLEGE BOOK DEPOT,

320, STRAND, LONDON.

WALFORD BROTHERS

Have always on hand a large Collection of STANDARD BOOKS, on Gardening, Agricultural, and General Literature, in good Library condition, at the very lowest prices.

Libraries and Parcels of Books purchased on liberal terms, and immediately paid for, and removed without trouble or expense to the Seller, from any part of the Country.

BOND'S PERMANENT MARKING INK,

The Original Invention, without Preparation, for writing Names and Initials upon

LINEN, SILK, COTTON, ETC.,

IS THE BEST AND BLACKEST.

Used extensively by Outfitters, Hotel Keepers, Shirt and Collar Makers, Army and Navy Clothiers, &c., &c.

"Having proved the excellence of this Ink, we have no hesitation in saying that it is one by itself, and not to be surpassed for durability and depth of colour."—*Blackwood's Ladies' Magazine*, 1841.

☞ To avoid disappointment from the substitution of counterfeits, Purchasers should be careful to observe the Address upon the Label of the Outside Wrapper, 10, BISHOPSGATE STREET WITHIN, E.C. Price One Shilling per Bottle. No Sixpenny size ever made.

Sold by all respectable Chemists, Stationers, &c., in the United Kingdom.

THE NEW BANKRUPTCY LAW.

IN THE PRESS,

THE BANKRUPTCY ACT, 1869;

TOGETHER WITH SO MUCH OF

The Debtors' Act, 1869, and the Bankruptcy Repeal and Insolvent Court Act, 1869, as relates to Bankruptcy. With Introduction, Explanatory Notes, and Index. By C. W. LOVESY, Esq., of the Middle Temple, Barrister-at-Law.

The above Work is intended to form a **Complete Practical Treatise** on the **Amended Law of Bankruptcy**, and will contain the whole of the General Rules and Orders of the Court of Bankruptcy, to be made in pursuance of Section 78 of the Principal Statute.

Now ready, 8vo., price 30*s.*,

GLEN'S LAW OF PUBLIC HEALTH. Fifth Edition.

This Edition is considerably enlarged and extended, and embraces the Law relating to Public Health and Local Government; Removal of Nuisances injurious to Health; the Prevention of Diseases; and Sewer Authorities. With the Statutes and Cases. By W. CUNNINGHAM GLEN, Esq., Barrister-at-Law.

Just published, price 4*s.*, Fourth Edition, greatly enlarged,

THE VACCINATION ACTS. With Introduction, Notes,

and Index; and an Appendix, containing the Circulars, Orders, and Regulations issued by the Registrar-General, the Poor-Law Board, and the Privy Council. By DANBY P. FRY, Esq., of the Poor-Law Board, Barrister-at-Law.

Now ready, price 3*s.* cloth,

THE VALUATION (METROPOLIS) ACT, 1869. With

Introduction, Explanatory Notes, and Index; and an Appendix. By DANBY P. FRY, Esq., of Lincoln's Inn, Barrister-at-Law, and of the Poor Law Board.

Now ready, price 1*s.* 6*d.*, Fourth Edition,

THE POOR RATE ASSESSMENT AND COLLECTION

ACT, 1869, to Amend the Law with regard to Occupiers for Short Terms, &c.; with Introduction, Copious Notes, and Index. By HUGH OWEN, Jun., Esq., of the Middle Temple, Barrister-at-Law.

Price 15*s.*,

THE LUNACY ACTS; containing all the Statutes relat-

ing to Private Lunatics, Pauper Lunatics, Criminal Lunatics, Commissions of Lunacy, Public and Private Asylums, and the Commissioners in Lunacy; with an Introductory Commentary; Notes to the Statutes, including References to Decided Cases; and a Copious Index. By DANBY P. FRY, Esq., of Lincoln's Inn, Barrister-at-Law.

Now ready, in One Vol., price 1*s.*,

STATUTES OF 1869:—I. The Sunday and Ragged

Schools Rating Exemption Act.—II. Beerhouses Act.—III. Poor Law Union Loans Act.—IV. Municipal Franchise Act. With Notes and Index. By HUGH OWEN, Jun., Esq., of the Middle Temple, Barrister-at-Law.

LONDON: KNIGHT AND CO., 90, FLEET STREET,

Publishers by Authority to the Poor Law Board, and to the Home Office for the Purposes of the Local Government Act.

ROYAL INSURANCE COMPANY.

HEAD OFFICES:

LONDON—Royal Insurance Buildings, Lombard Street.
LIVERPOOL—Royal Insurance Buildings, North John Street.

BRANCH OFFICES IN GREAT BRITAIN AND IRELAND:

Manchester, Birmingham, Bristol, Leeds, Sheffield, Newcastle, Edinburgh, Glasgow, and Dublin.

Chairman in London—WILLIAM WAINWRIGHT, Esq.
Chairman in Liverpool—CHARLES TURNER, Esq., M.P.

CAPITAL, TWO MILLIONS STERLING.

TOTAL ANNUAL REVENUE, £800,000.

FUNDS IN HAND AND INVESTED, £1,700,000.

The **ROYAL** has at each quinquennial Valuation PUBLISHED ITS LIFE ACCOUNTS in extenso, and has NEVER AMALGAMATED with any other Company.

A New and Valuable Scheme of Life Assurance

Has just been prepared by the Company for issuing

"COMPLETE LIFE POLICIES,"

restricting the payments of Premiums to a certain fixed number of years, and under which the Assured can discontinue his Policy at any time without suffering loss, as for every premium paid the Policy will hold good for a proportionate amount, SECURITY AGAINST FORFEITURE being thus given.

Particulars may be had upon application at the Company's Offices, or to any of the Agents.

AUDITORS' REPORT TO ANNUAL MEETING, August 6th, 1869.

"Every document, every account, every voucher, the bank-book, and every security, has been examined, and all were found to be perfectly correct."

Additions during the year to Reserve Funds, after paying Losses, Expenses, Annuities, Dividends, and all out-goings..... Fire £22,923. Life £144,945.

JOHN H. McLAREN, *Manager.*
JOHN B. JOHNSTON, *Secretary in London.*

ADVERTISING SHEET

OF THE

BRITISH ALMANAC AND COMPANION.

ATLAS FIRE & LIFE ASSURANCE OFFICE,

92, CHEAPSIDE, LONDON.

Established 1808,

And Empowered by Act of Parliament of the 54th Geo. III. c. 79.

Capital, £1,200,000.

DIRECTORS.

Chairman.—THOMAS CHAPMAN, Esq., F.R.S.

Deputy-Chairman.—BENJAMIN BUCK GREENE, Esq.

SIR WILLIAM J. W. BAYNES, Bart.	JOHN GEORGE MACLEAN, Esq.
ARTHUR EDWARD CAMPBELL, Esq.	REAR-ADMIRAL MONTGOMERY.
JAMES PATTISON CURRIE, Esq.	JAMES PHILLIPS, Esq., F.G.S.
JOSEPH GROTE, Esq.	JOSEPH PULLEY, Esq.
JOHN OLIVER HANSON, Esq.	PHILIP AINSLIE WALKER, Esq.

Auditors.—CHARLES GASSIOT, Esq., and RICHARD BLANEY WADE, Esq.

Secretary.—RICHARD RAY, Esq.

Actuary.—WILLIAM HENRY TYNDALL, Esq. *Solicitor.*—THOMAS BROWNING, Esq.

Consulting Actuary.—CHARLES ANSELL, Esq., F.R.S.

Medical Officer.—WILLIAM COULSON, Esq., F.S.A.

Bankers.—Messrs. PRESCOTT, GROTE, CAVE and CAVE.

This Office has been established more than 60 years, and its present magnitude and prosperity prove the soundness of the principles on which it has been conducted.

LIFE DEPARTMENT.

The Accumulated Premiums are over £1,650,000. The Annual Income exceeds £170,000

The sum of £4,911,321 has been paid in claims under Life Policies.

Large Bonuses have been declared and paid as additions to the amounts assured.

Premiums on Policies have been greatly reduced where parties have so applied the Bonuses on their Policies.

Persons Assuring in Great Britain have the option of *Participating Rates of Premium*, or of *Non-Participating Rates.*

Combined provision may be made for old age and early death, so that a person may secure a sum to be paid *to himself* at an age agreed upon, or to his executors if he should die before that age.

Residence in Countries beyond the limits of Europe is allowed on favourable terms; in most temperate climates without extra Premium, beyond a moderate charge for the voyage only. *Whole world* Assurances are granted.

Notices of the Assignment of Life Policies are received and acknowledged.

Advances are made on Policies to the extent of their value.

Persons desiring to surrender their Assurances may receive their value in money or in lieu thereof, may obtain a new Policy *without further payment of Premium.*

The Directors are ready to receive proposals for Assurances or any contingency involving payment of a sum at death.

FIRE DEPARTMENT.

This Company undertakes the Assurance of almost every species of Property in the United Kingdom, at Rates of Premium and upon principles which will be found quite as advantageous to the interests of the Assured as those offered by any other Office. The Directors can confidently refer to the well-known character of the Company for liberality and promptitude in the discharge of claims made upon it during the many years it has been established.

No charge made for Policy Stamps.

Renewals should be paid within fifteen days after the respective Quarter-days when they become due.

Losses occasioned by *Lightning* will be paid. The Policies of the *Company* extend to cover *Losses* occasioned by the *Explosion of Gas.*

The Company is ready to receive applications for agencies in those Towns and Districts in which it is not at present represented. Application to be made to the Secretary.

N.B.—ABOLITION OF THE GOVERNMENT DUTY.—*From and after Midsummer*, 1869, *all Fire Assurances are exempt from the payment of Government Duty.*

Tables of Rates, Forms of Proposal, and any information needful to effect Life or Fire Assurances, may be obtained on application to the Office, No. 92, Cheapside, London, or to any of the Company's Agents.

November, 1869.

THE Clergy Mutual Assurance Society.

ESTABLISHED IN 1829.

OFFICE, 2, BROAD SANCTUARY, WESTMINSTER.

Patrons.

HIS GRACE THE ARCHBISHOP OF CANTERBURY.
HIS GRACE THE ARCHBISHOP OF YORK.

President.

THE RIGHT HON. AND RIGHT REV. THE LORD BISHOP OF LONDON.

Trustees.

HIS GRACE THE ARCHBISHOP OF CANTERBURY.
HIS GRACE THE ARCHBISHOP OF DUBLIN.
THE LORD BISHOP OF WINCHESTER.
THE ARCHDEACON OF MAIDSTONE.

Directors.

Chairman.—THE ARCHDEACON OF LONDON.
Deputy Chairman.—THE HON. EDWARD W. DOUGLAS.

SIR E. ANTROBUS, BART., M.A.
CHARLES JOHN BAKER, ESQ.
THE ARCHDEACON OF BATH.
REV. CANON BLOMFIELD, M.A.
THE DEAN OF BRISTOL.
REV. JAMES C. BROWNE, D.C.L.
REV. J. L. CAMERON, M.A.
REV. ARTHUR P. PUREY-CUST, M.A.
REV. C. B. DALTON, M.A.
REV. W. H. DICKINSON, M.A.
ROBERT FEW, ESQ.
REV. J. D. GLENNIE, M.A.
CHRISTOPHER HODGSON, ESQ., M.A.
REV. CANON LONSDALE, M.A.
THE ARCHDEACON OF MAIDSTONE.
THE DEAN OF MANCHESTER.
REV. CHARLES MARSHALL, M.A.
REV. CANON NEPEAN, M.A.
THE ARCHDEACON OF NOTTINGHAM.
W. H. STONE, ESQ., M.D.
REV. CANON STONE, M.A.
CHARLES SUMNER, ESQ., M.A.
REV. JOSEPH TATLOR, M.A.
REV. WILLIAM WEBSTER, M.A.
THE ARCHDEACON OF WESTMINSTER.
REV. S. C. WILKS, M.A.
REV. DAVID WILLIAMS, M.A.
F. L. WOLLASTON, ESQ., M.A.

Counsel.—THOMAS BOURDILLON, ESQ., M.A., Stone Buildings, Lincoln's Inn.
Solicitors.—MESSRS. LEE & BOLTON, No. 2, Broad Sanctuary, Westminster.
Auditors.—FREDERICK MILDRED, ESQ.—CHARLES BARRER, ESQ.—ROBERT J. LODGE, ESQ.
REV. ALEXANDER WILSON, M.A.
Bankers.—MESSRS. COUTTS & CO. *Actuary.*—STEWART HELDER, ESQ.
Consulting Actuary.—CHARLES ANSELL, ESQ., F.R.S.
Physician.—DR. STONE, 18, Vigo Street, W. *Secretary.*—REV. JOHN HODGSON, M.A.

The clergy and all others qualified to make Assurances upon Life in this Society are informed that Assurances upon Life may be made upon payment of Reduced Annual Premiums, viz., upon payment of "four-fifths" of the rates chargeable according to the Society's Table, *subject to certain conditions.* A Prospectus setting forth the table of reduced rates, and the special conditions referred to, may be had by application at the Office.

Bonus.—The whole available Bonus is the sole property of Life Assurers; no part whatever is taken from it to be shared amongst proprietors. At the end of every fifth year, profits are equitably apportioned amongst existing Life Assurances. By means of Bonus upwards of One Hundred of the earlier Life Assurances have been relieved altogether from the payment of Annual Premiums, and additions made to sums Assured; £200,500 was divided amongst Life Assurances in May, 1866.

Assurers have the privilege at the time of making an Assurance of selecting the mode in which the Bonus, whenever due, shall be applied, *i.e.*, either in an immediate Cash payment, or to the reduction of the Annual Premium, or to the increase of the Capital sum assured.

Next Bonus in 1871. Assurances made previously to such year will share therein.

ASSURANCES may be effected on LIVES, SURVIVORSHIPS, &c. &c., as stated in the Society's Prospectus, to any amount not exceeding £7,500.

Applications for Prospectuses, or further information, to be made at the Office, 2, BROAD SANCTUARY, WESTMINSTER.

This Society is strictly confined to the Clergy of the Church of England and of the Episcopal Church of Scotland, their Wives and Families, and the near relations of themselves and Wives.

Prospectuses, Bonus Accounts, &c., to be had at the Office, on personal application, or by letter.

Also, "NOTES UPON LIFE ASSURANCE," by the Rev. JOHN HODGSON, M.A., Secretary.

THE Eagle Insurance Company,

79, PALL MALL,

LONDON, S.W.

DIRECTORS.

WILLIAM FREDERICK DE LA RUE, Esq., *Chairman.*

ROBERT A. GRAY, Esq., *Deputy-Chairman.*

CHARLES BISCHOFF, Esq.	JAMES MURRAY, Esq.
THOMAS BODDINGTON, Esq.	PHILIP ROSE, Esq.
CHARLES CHATFIELD, Esq.	GEORGE RUSSELL, Esq.
Sir J. BULLER EAST, Bart., D.C.L.	THOMAS GODFREY SAMBROOKE, Esq.
WILLIAM AUGUSTUS GUY, M.D., F.R.S.	Rear-Admiral TINDAL.
CHARLES THOMAS HOLCOMBE, Esq.	The Rt. Hon. Sir JOHN YOUNG, Bart., K.C.B.
JOSHUA LOCKWOOD, Esq.	

Auditors—THOMAS ALLEN, Esq.; HENRY ROSE, Esq.

Medical Officers—J. W. OGLE, M.D.; WM. COOKE, Esq., M.D.

Surgeon—GEORGE CURSHAM, M.D.

The Business of the Company comprises Assurances on Lives and Survivorships, Granting of Contingent Annuities, Loans of Money on Mortgage, &c.

The realized Assets of this Company are upwards of Three Millions sterling.

The Annual Income is about a Half-Million sterling.

The number of existing Policies is upwards of Twenty Thousand.

The total Amount Insured exceeds Thirteen Millions sterling.

The Divisions of Surplus are Quinquennial, and the whole surplus (less twenty per cent. only) is distributed amongst the Assured.

At the last Division of Surplus the additions to the Sums Assured, under Policies effected upon the participating scale, ranged, according to the age of the life assured, from 20 to 70 per cent. of the Premiums paid.

The Premiums required, although moderate, entitle the Assured to 80 per cent. of the Quinquennial Surplus.

The Lives Assured are permitted, in time of Peace, without extra charge, to reside in any country (Australia and California excepted) north of 33 degrees north latitude, or south of 33 degrees south latitude, or to pass by sea (not being seafaring persons by profession) between any places lying north of 33 degrees north latitude, or lying south of 33 degrees south latitude.

All Policy Stamps and Medical Fees required on effecting Assurances are paid by the Company.

By recent enactments, persons are exempt, under certain restrictions, from Income Tax, as respects so much of their income as they may devote to Assurance on Lives.

The Annual Reports of the Company's state and progress, Prospectuses, and Forms, may be had, or will be sent, post free, on application at the Office, or to any of the Company's Agents.

EQUITY AND LAW LIFE ASSURANCE SOCIETY,

18, LINCOLN'S-INN FIELDS, LONDON, W.C.

ESTABLISHED 1844.

CAPITAL £1,000,000, FULLY SUBSCRIBED.

TRUSTEES.

THE RIGHT HON. EDWD. CARDWELL, M.P.
THE RIGHT HON. SIR WILLIAM ERLE.
THE RIGHT HON. SIR FREDERICK POLLOCK, Bart.
THE RIGHT HON. SIR J. TAYLOR COLERIDGE.
THE HON. THE VICE-CHANCELLOR, SIR RICHARD MALINS.
JOHN ELLIS CLOWES, Esq.
THOMAS GLOVER KENSIT, Esq.

DIRECTORS.

GEORGE LAKE RUSSELL, Esq., *Chairman.*
JOHN MOXON CLABON, Esq., *Deputy-Chairman.*
Actuary and Secretary—THOMAS BOND SPRAGUE, Esq., M.A.

The NEW BUSINESS of **1868** comprised Insurances for **£356,833**; and the Premiums received thereon amounted to **£11,318.**

The total INCOME of **1868** was **£126,627**, and the outgoings of every description **£65,332.** The available ASSETS at the end of the year were **£683,773.**

The EXPENSES of MANAGEMENT now amount to only *Four per cent.* on the Income.

The realized PROFITS are ascertained every Five Years; and NINE-TENTHS of the whole are divided among the Assured. As considerably more than one-tenth of the Profits is derived from Policies which do not participate in the Profits, it will be seen that *the Assured have greater advantages in this Society than if they formed a Mutual Insurance Company*, dividing among themselves the whole of the Profits derived from their own Policies.

At the DIVISION of PROFITS, to 31st December, 1864, the sum of £62,961 6s. was divided among the Assured, holding Policies for £1,339,608; and the Reversionary Bonuses added to the Policies amounted to £112,000.

THE FOLLOWING TABLE SHOWS THE TOTAL BONUSES ADDED TO POLICIES of £1,000 EACH UP TO 31ST DEC., 1864:—

Age at Entry.	Sum Assured.	NUMBER OF PREMIUMS PAID.			
		Twenty.	Fifteen.	Ten.	Five.
	£	£ s.	£ s.	£ s.	£ s.
20	1000	303 10	228 0	161 10	71 10
30	1000	342 10	250 10	176 0	77 0
40	1000	385 0	280 10	197 0	85 0
45	1000	411 10	303 10	210 0	90 10
50	1000	438 0	334 0	231 0	99 10
55	1000	.. ..	382 10	265 0	113 10
60	1000	.. ..	450 10	316 10	133 10

The PREMIUMS are calculated for every half-year of Age.

The CONDITIONS of the POLICIES allow persons whose lives are insured to reside in any part of the world distant more than 33° from the Equator.

The Business of the Society includes the PURCHASE and the Granting of LOANS upon the security of LIFE INTERESTS and REVERSIONS; also the Granting of IMMEDIATE ANNUITIES.

The ANNUAL REPORTS of the Directors are regularly printed, with full accounts of the Receipts and Expenditure, and may be obtained by written or personal application at the Office.

The Guardian Fire & Life Assurance Company.

ESTABLISHED 1821.

11, LOMBARD STREET, LONDON, E.C.

SUBSCRIBED CAPITAL, £2,000,000.

Directors.

Chairman—WILLIAM STEVEN, Esq.
Deputy-Chairman—FREDERICK H. JANSON, Esq.

HENRY HULSE BERENS, Esq.
HENRY BONHAM-CARTER, Esq.
CHARLES WILLIAM CURTIS, Esq.
CHARLES F. DEVAS, Esq.
FRANCIS HART DYKE, Esq.
Sir WALTER R. FARQUHAR, Bart.
JAMES GOODSON, Esq.
ARCHIBALD HAMILTON, Esq.
THOMSON HANKEY, Esq.
RICHARD M. HARVEY, Esq.
JOHN G. HUBBARD, Esq.
G. J. SHAW LEFEVRE, Esq., M.P.
JOHN MARTIN, Esq.
ROWLAND MITCHELL, Esq.
JAMES MORRIS, Esq.
ABRAHAM J. ROBARTS, Esq.
HENRY VIGNE, Esq.

Auditors.

HENRY S. THORNTON, Esq.; CORNELIUS PAINE, Esq.; NOEL WHITING, Esq.

Sec.—THOMAS TALLEMACH, Esq. *Actuary*—SAMUEL BROWN, Esq., *Pres. Ins. Actuaries.*
Superintendent of Fire Department—ISAAC DELVALLE, Esq.
Physician—Dr. J. RUSSELL REYNOLDS, F.R.S., 38, Grosvenor Street, W.
Solicitors—Messrs. PARKIN and PAGDEN, 5, New Square, Lincoln's Inn, W.C.
Surveyor—J. JENNINGS, Esq., Langham Street, W.
Bankers—Messrs. MARTIN & Co., 68, Lombard Street; Messrs. COUTTS & Co., 59, Strand.

LIFE DEPARTMENT.

Under the Provisions of an Act of Parliament, this Company now offers to new Insurers EIGHTY PER CENT. OF THE PROFITS, AT QUINQUENNIAL DIVISIONS, OR A LOW RATE OF PREMIUM, without participation of Profits. The next Valuation will be declared in June, 1870.

At the last Quinquennial valuation at Christmas, 1864, the Life Assurances in force, exclusive of Bonuses thereon, amounted to upwards of £4,500,000, the Income from the Life Branch £212,000 per annum, and the Life Assurance Fund exceeded £1,656,000 invested in first class securities.

A Statement of the Assets and Liabilities may be obtained on application.

Example of Annual Premiums for the Assurance of £100.

Age not above	At Death. With Profits.	At Death. Without Profits.	At Age of 60, or upon Death before, without Profits.	Age not above	At Death. With Profits.	At Death. Without Profits.	At Age of 60, or upon Death before, without Profits.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
20	2 1 0	1 13 3	2 5 9	40	3 5 0	2 17 0	5 3 9
25	2 5 4	1 17 4	2 14 2	45	3 14 11	3 6 11	7 2 2
30	2 10 7	2 2 7	3 5 5	50	4 8 0	4 0 0	10 19 3
35	2 17 0	2 9 0	4 0 9	60	6 7 2	6 0 0	....

N.B.—The limits for Foreign Residence and Travel have been recently greatly extended, and in certain cases Policies may be issued free from *all* restrictions.

No expense incurred beyond payment of premium.

FIRE DEPARTMENT.

Insurances against loss and damage by Fire are effected upon every kind of Property at home and abroad.

The Duty to Government is now abolished, thereby reducing the Annual Charge for Insurance on ordinary risks to 1s. 6d. for £100.

No expense is incurred on effecting an Insurance, or in transferring Insurances from other Offices, beyond the payment of the Premium.

Forms of Proposal, Prospectus, &c., may be obtained from the Office.

T. TALLEMACH, *Secretary.*

HAND-IN-HAND

FIRE AND LIFE INSURANCE SOCIETY,

1, NEW BRIDGE ST., BLACKFRIARS, LONDON, E.C.

Instituted in 1696.—*Extended to Life Insurance*, 1836.

DIRECTORS.

The Hon. WILLIAM ASHLEY.
T. PALMER CHAPMAN, Esq.
Gen. the Hon. Sir EDWARD CUST.
JOHN LETTSOM ELLIOT, Esq.
JOHN GURNEY HOARE, Esq.
FREDERICK LOCKER, Esq.
T. FULLER MAITLAND, Esq.
JOHN SPERLING, Esq.
GORDON E. SURTEES, Esq.
THOMAS TURNER, Esq.
F. MAITLAND WILSON, Esq.
W. ISDAILE WINTER, Esq.

AUDITORS.

Colonel the Hon. P. F. CUST. JOHN LETTSOM ELLIOT, Esq. ANDREW JOHNSTON, Esq., M.P.

Bankers—Messrs. GOSLING and SHARPE, 19, Fleet Street.
Physician—THOMAS K. CHAMBERS, M.D., 64, Brook Street, Grosvenor Square.
Solicitors—Messrs. NICHOLL, BURNETT, and NEWMAN, 8, Howard Street, Strand.
Actuary and Secretary—JAMES M. TERRY, Esq.
Assistant Secretary—BENJAMIN BLENKINSOP, Esq.
Assistant Actuary—JAMES TERRY, Esq.

The oldest Insurance Office in existence. Founded and still conducted on the **Mutual System.**

Large returns made to Members in **each Department.**

The whole of the Profits are divided annually amongst the Members of Five Years' standing and upwards—there being no Shareholders.

The rate of abatement of Premium thereby given for the current year on Life Policies is **60 per cent.** for the Old Series, and **50 per cent.** for the New Series.

The rate of return on Septennial Fire Policies (charged at 1s. 6*d.* per cent.) is **66 per cent.**

The Directors are willing to appoint as Agents, persons of good position and character.

24th DECEMBER, 1868.

Claims paid on Life Policies to this date	£738,092.
Returned in Abatement of Premiums do.	555,544.

ASSETS.

Accumulated Fund	£1,252,174.
Present Value of Life Premiums	1,271,369.

LIABILITIES.

Present Value of Sums Insured (£3,166,596) . . .	£1,542,361.
Present Value of Life Annuities (£8,737 per Annum)	68,295.

Further details as to the Assets and Liabilities of the Office, may be had on application to the Secretary.

By order of the Board,
JAMES M. TERRY, *Actuary and Secretary.*

THE

LONDON LIFE ASSOCIATION,

81, King William Street, London, E.C.

Established 1806.

PRESIDENT—BARON HEATH.

VICE-PRESIDENT—ALFRED HEAD, Esq.

TRUSTEES.

FRANCIS HENRY MITCHELL, Esq. | GEORGE FRED. POLLOCK, Esq.
DAVID SALOMONS, Esq., M.P. | JAMES EWING MATHIESON, Esq.

DIRECTORS.

JOHN BAGGALLAY, Esq. | CHARLES J. FURLONGER, Esq.
WILLIAM CORRIE, Esq. | HENRY S. KING, Esq.
JOHN COSTEKER, Esq. | JOS. JOHNSON MILES, Esq.
HENRY T. CURTIS, Esq. | ROBERT POTT, Esq.
THOMAS DEVAS, Esq. | S. WILLIAM SILVER, Esq.
SAMUEL FISHER, Esq. | W. FLEXMAN VOWLER, Esq.

Has Policies now in force amounting to . . £7,300,000
Has a Fund Invested in First Class Securities of more than 3,000,000
Has Paid Policy Claims amounting to . . . 5,540,000

The ASSOCIATION employs NO AGENTS, and pays NO COMMISSION in any shape, for the introduction of Policies.

Its expenses are small, being little more than Three per cent. of its gross income.

It investigates its affairs every year, and applies the surplus SOLELY in reduction of the Premiums, which by this means have been reduced, on the average, One per cent. per annum for the last 29 years, and this increasing rate of reduction is expected to continue.

PREMIUMS commenced before JANUARY, 1856, are reduced 89 per cent.
,, ,, JULY, 1865, will be reduced 79 ,,
,, commencing NOW are expected to be reduced 71 ,,

These reductions commence after the 7th payment.

EDWARD DOCKER, *Secretary.*

September, 1869.

THE LONDON ASSURANCE CORPORATION,

For Fire, Life, & Marine Assurances.

Incorporated by Royal Charter, A.D. 1720.

OFFICES—No. 7, ROYAL EXCHANGE, E.C.; AND No. 7, PALL MALL, S.W.

JAMES BLYTH, Esq., *Governor.*
EDWIN GOWER, Esq., *Sub-Governor.*
DAVID POWELL, Esq., *Deputy-Governor.*

Directors.

NATH. ALEXANDER, Esq.	BONAMY DOBREE, Esq.	HENRY J.B. KENDALL, Esq.
J. A. ARBUTHNOT, Esq.	JOHN ENTWISLE, Esq.	CHARLES LYALL, Esq.
HARVEY BRAND, Esq.	GEORGE L. M. GIBBS, Esq.	CAPT. R. W. PELLY, R.N.
EDWARD BUDD, Esq.	ROBERT GILLESPIE, Esq.	WILLIAM RENNIE, Esq.
ALFRED D. CHAPMAN, Esq.	HARRY GEO. GORDON, Esq.	P.F.ROBERTSON, Esq.
MARK W. COLLET, Esq.	A. C. GUTHRIE, Esq.	ROBERT RYRIE, Esq.
SIR F. CURRIE, Bart.	JOHN A. HANKEY, Esq.	LEWIS A. WALLACE, Esq.
F. G. DALGETY, Esq.	LOUIS HUTH, Esq.	WILLIAM B. WATSON, Esq.

Secretary.—JOHN P. LAURENCE, Esq. *Actuary.*—ARTHUR H. BAILEY, Esq.

Underwriter.—JOHN ANTHONY RUCKER, Esq.

Manager of the Fire Department.—THOS. B. BATEMAN, Esq.

Physician.—EDWARD CLAPTON, M.D., St. Thomas's-street, Southwark.

West End Office, No. 7, Pall Mall, S.W.

HENRY KINGSCOTE, Esq. CHARLES WILLIAM EARLE, Esq.

LIFE DEPARTMENT.

The expenses of management are paid by the Corporation, and not charged to the Life Assurance Funds—an advantage afforded by no other Office.

Assurances may be effected without Participation in Profits, at low rates of Premium, or with Participation in Profits, upon either of the following plans, viz.:

The Profits being appropriated as an Annual Abatement of Premium on Policies of Five Years' standing, the abatement from the original Premium for the year 1868 was at the rate of 40 per cent.

The Profits being appropriated at the end of every Five Years, either in increase of the Sum Assured, or as an immediate Cash payment. At the last division made to the 31st December, 1865, the Cash Bonus amounted to more than 28 per cent. of the Premiums paid during the quinquennial period, the corresponding Reversionary Bonus averaging nearly two per cent. per annum on the Sum Assured.

Enlarged limits for Foreign Travelling and Residence, without any extra charge; also, moderate and uniform rates for all Tropical climates have been adopted.

FIRE DEPARTMENT.

FIRE INSURANCES effected at Moderate Rates upon every Description of Property.

MARINE DEPARTMENT.

MARINE INSURANCES can be effected at the HEAD OFFICE of the Corporation, and at CALCUTTA, MADRAS, BOMBAY, MAURITIUS, HONG KONG, and SHANGHAI.

North British and Mercantile

INSURANCE COMPANY.

ESTABLISHED 1809.

Incorporated by Royal Charter and Special Acts of Parliament.

At the Annual General Meeting of the Proprietors, held in Edinburgh, on 1st March, 1869, JOHN WHITE CATER, Esq., in the Chair, a Report by the Directors was read, showing the following results for the year 1868:—

FIRE DEPARTMENT.

The Net Premiums during the year amounted to . . .	£415,544
During the year 1867 the Net Premiums were . . .	333,985
Showing an increase in 1868 of . . .	£81,559
The Total Losses by Fire during the year amounted to .	£222,792

LIFE DEPARTMENT.

New Policies were issued, insuring	£738,582
and adding to the Revenue in New Premiums the sum of	23,574

ANNUITY DEPARTMENT.

41 Bonds were granted, for which was received the sum of	£17,268
During the year 36 Annuities fell in, relieving the Company of annual payment of	1,305

On the motion of the Chairman, seconded by George A. Jamieson, Esq., the Report was unanimously approved of, and a Dividend was declared at the rate of £12 per cent. (equal to 15*s.* a Share), and a Bonus of £4 per cent. (or 5*s.* per share), making in all 20*s.* a Share on the paid-up Capital Stock of the Company, payable on 15th March, free of Income Tax.

After paying this Dividend and Bonus, and all expenses, the result of the business for the year has been to add **£44,452** to the Reserves of the Company.

The Fund now amounts to	£435,668
The Annual Revenue to	801,801
And the Total Accumulated Fund to . .	2,838,118

CHIEF OFFICES.

LONDON, 61, THREADNEEDLE STREET, E.C.

WEST END OFFICE, 8, WATERLOO PLACE, S.W.

EDINBURGH, 64, PRINCES STREET.

By Order,

F. W. LANCE, *Secretary.*

PROVIDENT LIFE OFFICE,

No. 50, REGENT STREET, LONDON, W.

ESTABLISHED 1806.

Invested Capital, £1,773,032. Annual Income, £223,667.

Bonuses Declared, £1,780,651.

Claims Paid since the Establishment of the Office, £4,312,002.

The Directors of the PROVIDENT LIFE OFFICE feel it to be their duty at the present time to place before their policy-holders and the public such a statement of the affairs of the Office as shall be intelligible to every reader; they have therefore prepared Tables in which are produced in detail the sums insured at each age by all their policies now in existence, and the annual premiums payable to the Office. These show an *ultimate liability* of £5,025,310 6*s*. 1*d*. and a *present annual income* from premiums of £141,682 13*s*. 8*d*.

A third Table shows that in addition to *this annual income* the assets, realized and invested, amount to £1,772,363 19*s*., producing in like manner an *annual income* in the shape of interest.

So far this is a simple statement of an ordinary account. The question now to be determined by an actuarial operation is how far will these assets and incomes serve to realize the five millions of liability. The answer is given—a surplus of £367,459 being shown as the result.

The solemn declaration which accompanies the original statement, and the fact that the accounts are open to the criticism of the whole Society of Actuaries and of all the Managers of the Life Offices of the United Kingdom, must be held a sufficient proof of their correctness until the reverse be shown.

The Tables referred to may be obtained upon application at the Head Office of the Society, No. 50, Regent Street, W.; or at the City Office, No. 14, Cornhill, E.C.

Examples of Bonuses added to Policies issued by

THE PROVIDENT LIFE OFFICE.

Number of Policy.	Date of Policy.	Annual Premium.	Sum Insured.	Amount with Bonus Additions.
		£ s. d.	£	£ s. d.
4,718	1823	194 15 10	5,000	11,658 9 2
5,532	1825	36 16 8	1,000	2,182 11 8
5,744	1825	155 16 8	4,000	8,883 5 4
5,915	1826	18 8 4	500	1,062 19 7
8,452	1834	38 19 2	1,000	1,806 15 10
10,605	1841	31 16 8	500	896 6 2
12,264	1845	22 13 4	500	732 11 8

JOHN HODDINOTT, *Secretary.*

EQUITABLE ASSURANCE SOCIETY.

TEMPORARY OFFICES:

No. 11, NEW BRIDGE STREET, BLACKFRIARS.

Directors.

THE RIGHT HON. LORD TREDEGAR, *President.*

WILLIAM FREDERICK POLLOCK, Esq., and JAMES SPICER, Esq., *Vice-Presidents.*

FREDERICK COWPER, Esq.	RICHARD GOSLING, Esq.	GEORGE SCOVELL, Esq.
CHARLES CURLING, Esq.	PHILLIP HARDWICK, Esq.	JOHN CHAS. TEMPLER, Esq.
WILLIAM EDWARDS, Esq.	SIR W. C. JAMES, Bart.	RICHARD TWINING, Esq.
GEORGE FENNING, Esq.	JOHN ALLDIN MOORE, Esq.	JOHN WALTER, Esq., M.P.

The EQUITABLE, established in 1762, is the oldest Mutual Life Office in the United Kingdom.

The entire profits are divisible among its members, no portion of the same being diverted either for "commission" to agents or for dividends on shares.

During the century of its existence it has paid £19,000,000 in claims, and £17,800,000 for bonuses on the same.

The Invested Capital on the 30th of June, 1869, consisted of—

£2,614,517	15	2	Cash advanced on Mortgage.
580,000	0	0	Stock in the 3 per Cent. Reduced Bank Annuities.
475,000	0	0	Stock in the 3 per Cent. Consolidated Bank Annuities.
200,000	0	0	Stock in the New 3 per Cent. Annuities.
540,000	0	0	Cash advanced on Debentures guaranteed by the Secretary of State for India.
75,000	0	0	Cash advanced on English Railway Debentures.
180,150	0	0	Cash advanced on Security of Policies.

The Reserve at the last rest, in December, 1859, exceeded £770,000, as a basis for future divisions.

Loans on Policies.—The Directors make advances on deposit of the Policies.

☞ *A Court of Directors is held every* Wednesday, *from Eleven to One o'Clock, to receive Proposals for new Assurances; and a Short Account of the Society may be had on Application, personally or by post, at the Office.*

THE

General Reversionary & Investment Company.

Office—No. 5, WHITEHALL, LONDON, S.W.

ESTABLISHED 1836.

Further Empowered by Special Act of Parliament, 14 and 15 Vict. cap. 130.

CAPITAL £500,000.

DIRECTORS.

Chairman—GEORGE PERCY ELLIOTT, Esq.

Deputy-Chairman—CHARLES THOMAS HOLCOMBE, Esq.

THOMAS BLACKALL, Esq., M.D.	THOMAS GODFREY SAMBROOKE, Esq.
JOHN CHAVE LUXMOORE, Esq.	SEYMOUR TEULON, Esq.
Colonel JOSEPH W. JASPER OUSELEY.	HENRY WALMISLEY, Esq.

Auditors—WM. R. BARKER, Esq., GEO. HUGHES, Esq., and CHAS. H. SAVORY, Esq.

Bankers—Messrs. DRUMMOND.

Solicitors—Messrs. C. J. & H. SHOUBRIDGE, 1, Lincoln's Inn Fields, W.C.

The business of this Company consists in the PURCHASE of, or LOANS upon, REVERSIONARY INTERESTS, vested or contingent, in *Landed* or *Funded Property*, or *Securities*; also

LIFE INTERESTS in *Possession*, as well as in *Expectation*; and

POLICIES of INSURANCE upon LIVES.

Loans upon Reversions may be obtained either at an Annual Interest, or in consideration of deferred charges, payable upon the *Reversions* falling in.

IMMEDIATE ANNUITIES are likewise granted upon the latter principle to persons entitled to Reversionary Interests, who may thus obtain an income until their property falls into possession, without being called upon for any payment until that event.

Prospectuses and Forms of Proposals may be obtained from the Secretary, to whom all communications should be addressed.

By order of the Board of Directors,

WM. BARWICK HODGE, *Actuary and Secretary.*

GOVERNESSES' BENEVOLENT INSTITUTION.

INCORPORATED BY ROYAL CHARTER,

WITH POWER TO HOLD LAND BY GIFT, PURCHASE, OR BEQUEST.

BOARD OF MANAGEMENT.

THE HON. WILLIAM ASHLEY.
PATRICK BLACK, Esq., M.D.
THE REV. ALFRED J. BUSS, B.A.
B. BOND CABBELL, Esq., F.R.S.
ARTHUR RISDON CAPEL, Esq.
JAMES CAPEL, Esq.
F. PATEY CHAPPELL, Esq.
W. TIMBRELL ELLIOTT, Esq.
JOHN WILLIAM HALE, Esq.
EDWARD B. HARTOPP, Esq., M.P.
THE LORD HOUGHTON.
THE HON. ARTHUR KINNAIRD, M.P.
J. TIDD PRATT, Esq., F.S.A.
THOMAS G. SAMBROOKE, Esq.
THE EARL OF SHREWSBURY AND TALBOT.
W. JESSE STREET, Esq.
EDWARD THORNTON, Esq.
W. FOSTER WHITE, Esq.
EDWARD WILDER, Esq.
T. PARRY WOODCOCK, Esq.

Honorary Secretary—MRS. DAVID LAING.
Secretary—CHARLES WILLIAM KLUGH, Esq., 32, Sackville Street, W.
Secretary to the Provident Fund—JOHN EVEREST, Esq.

The objects of this Society are—

Temporary Assistance to Governesses in distress, afforded privately and delicately, through the Ladies' Committee.

Annuity Fund. Elective Annuities to Aged Governesses, secured on invested capital, and thus independent of the prosperity of the Institution.

Provident Fund. Provident Annuities purchased by Ladies in any way connected with Education, upon Government Security, agreeably to the Act of Parliament. This branch includes a Savings Bank.

A Home for Governesses during the intervals between their engagements.

A System of Registration, entirely free of expense.

An Asylum for the Aged.

Membership consists in the payment of an annual Guinea, or of Ten Guineas in one sum. Subscribers are entitled to vote for Annuities in the proportion of one Vote for each Annual Half-Guinea not in arrear, and for each Donation of Five Guineas. Subscriptions are due on the 1st of January, and can always be remitted by Post Office Order, or by a Cheque crossed 'Sir S. Scott & Co.'

London and Provincial Law Assurance Society,

No. 21, FLEET STREET, E.C.

CAPITAL, ONE MILLION.

ABBOTT, CHARLES JAMES, Esq., New Inn.
BENNETT, ROWLAND NEVITT, Esq., Lincoln's Inn.
BLOXAM, C. J., Esq., 1, Lincoln's Inn Fields.
CHOLMELEY, STEPHEN, Esq., Lincoln's Inn Fields.
EELE, PETER, Esq., Q.C., Park Crescent.
FANE, W. D., Esq., Norwood Hall, Southwell, Notts.
FREEMAN, LUKE, Esq., Coleman Street.
GASELEE, Mr. Serjeant, M.P., Serjeants' Inn.
GWINNETT, WILLIAM HENRY, Esq., Cheltenham.
HEDGES, JOHN KIRBY, Esq., Wallingford.
HOPE-SCOTT, J. R., Esq., Q.C., Temple, *Chairman.*
JAY, SAMUEL, Esq., Lincoln's Inn.
LAW, H. S., Esq., Bush Lane, *Deputy-Chairman.*
LAWRANCE, EDW., Esq., 14, Old Jewry Chambers.
LEFROY, G. B., Esq., 5, Robert Street, Adelphi.
LOCKE, JOHN, Esq., Q.C., M.P., Temple.
LOFTUS, THOMAS, Esq., New Inn.
LUCAS, CHARLES ROSE, Esq., Lincoln's Inn.
STEWARD, SAMUEL, Esq., Lincoln's Inn Fields.
STILL, ROBERT, Esq., Lincoln's Inn.
TILLEARD, JOHN, Esq., Old Jewry.
VIZARD, WILLIAM, Esq., 55, Lincoln's Inn Fields.
WARTER, H. D., Esq., Longden Manor, nr. Shrewsbury.
WHITE, THOMAS, Esq., Bedford Row.

Auditors.

PHILIP ROBERTS, Esq., South Square, Gray's Inn.
J. W. TAYLOR, Esq., Great James St., Bedford Row.
JOSIAH T. PAUL, Esq., Tetbury.
STERLING WESTHORP, Esq., Ipswich.

Physician—H. PITMAN, M.D., 28, Gordon Square. *Solicitor*—R. H. BURNE, Esq., 37, Lincoln's Inn Fields.
Bankers—UNION BANK OF LONDON (Temple Bar Branch). *Actuary & Secretary*—A. DAY, Esq.

The Society commenced business in the year 1846.

On the 31st December, 1868,—

The total amount of existing Assurances was	£2,600,000
The Society's Investments amounted to	500,609
The Annual Premium Income in 1868 was	77,237
The total Income was	97,500
The Expenses of Management were	3,478
The Premiums on New Assurances were	10,067

From the above statement it appears that, after the operations of 23 years only, the Society had in hand assets amounting to nearly 20 per cent. of the existing Assurances,—an amount equivalent to 6¼ years' purchase of the present Annual Premiums: the expenses of management being 3½ per cent. only on the total income.

FOUR-FIFTHS OF THE PROFITS divided amongst the Assured every Five Years. Persons insured Two Years, dying before the division, share in Profits.

The Reversionary Bonuses added to the Policies in this Society have amounted, on the average, to Two per cent. per Annum on the sum assured.

PELICAN LIFE INSURANCE COMPANY.

ESTABLISHED IN 1797.

70, Lombard St., City, and 57, Charing Cross, Westminster.

DIRECTORS.

HENRY R. BRAND, Esq., M.P.
OCTAVIUS E. COOPE, Esq.
JOHN COOPE DAVIS, Esq.
HENRY FARQUHAR, Esq.
CHARLES EMANUEL GOODHART, Esq.
JAS. A. GORDON, Esq., M.D., F.R.S.
KIRKMAN D. HODGSON, Esq.
HENRY LANCELOT HOLLAND, Esq.
SIR JOHN LUBBOCK, Bart., F.R.S.
JOHN STEWART OXLEY, Esq.
BENJAMIN SHAW, Esq.
MARMADUKE WYVILL, Jun., Esq.

FINANCIAL POSITION.

Total Amount Insured with Bonus Additions		£3,007,431
Liability on the same at 3 per cent. Interest		846,712
Accumulated Funds		1,227,253
Annual Revenue from Premiums	£92,787	
„ „ from Interest	57,163	
		149,950

The whole invested in Government, Real, and other first-class Securities, in addition to which the assured have the guarantee of a large and wealthy proprietary.

For Prospectuses and Forms of Proposal apply at the Offices as above, or to the Agents of the Company.

ROBERT TUCKER, *Secretary and Actuary.*

ROCK LIFE ASSURANCE COMPANY.

ESTABLISHED A.D. 1806.

No. 15, NEW BRIDGE ST., BLACKFRIARS, LONDON, E.C.

DIRECTORS.

G. P. BIDDER, Esq.
J. G. DODSON, Esq., M.P.
D. A. FREEMAN, Esq.
G. A. FULLER, Esq.
J. GODDARD, Esq.
R. HUDSON, Esq., F.R.S.
S. LAURENCE, Esq.
T. H. LONGDEN, Esq.
Lieut.-Gen. Sir G. St. P. LAWRENCE, K.C.S.I., C.B.
C. T. LUCAS, Esq.
J. D. MAGENS, Esq.
C. RIVAZ, Esq.
W. B. TOWSE, Esq.
S. H. TWINING, Esq.

The **ROCK LIFE ASSURANCE COMPANY,** which has been established upwards of **Half a Century,** has an **Accumulated Fund** of more than **Three Millions Sterling,** invested in Mortgages on Land, and other first-class Securities:—

	£	s.	d.
Viz., on the 20th August, 1868	3,172,604	15	8
Sum Assured—Inclusive of Bonus Additions—at that date	5,380,750	2	11
Estimated Liability thereon (Northampton Table of Mortality, 3 per Cent. Interest)	1,481,569	0	4

That is less than one-half the Fund invested.

Total Amount of Bonus Additions made to Policies	2,895,059	19	9
Amount of Profits divided for the Seven Years ending 20th August, 1868	532,369	7	8
Annual Income	314,867	14	3
Total Claims paid—Inclusive of Bonus Additions	6,627,044	7	7

Copies of the Annual Reports and Balance Sheets, as well as of the Periodical Valuation Accounts, Tables of Rates, and every information to be obtained on application.

JOHN RAYDEN, *Actuary.*
H. W. PORTER, *Sub-Actuary.*

ROYAL EXCHANGE ASSURANCE CORPORATION.

Established A.D. 1720, by Charter of King George the First, and confirmed by Special Acts of Parliament.

CHIEF OFFICE, ROYAL EXCHANGE, LONDON; BRANCH, 29, PALL MALL.

OCTAVIUS WIGRAM, Esq., *Governor.* JAMES STEWART HODGSON, Esq., *Sub-Governor.*

CHARLES JOHN MANNING, Esq., *Deputy-Governor.*

Directors.

ROBERT BARCLAY, Esq.
JOHN GARRATT CATTLEY, Esq.
MARK CURRIE CLOSE, Esq.
EDWARD JAMES DANIELL, Esq.
WILLIAM DAVIDSON, Esq.
LANCELOT WILLIAM DENT, Esq.
ALEXANDER DRUCE, Esq.
FREDERICK JOSEPH EDLMANN, Esq.
CHARLES HERMANN GOSCHEN, Esq.
RIVERSDALE WILLIAM GRENFELL, Esq.
FRANCIS ALEX. HAMILTON, Esq.
ROBERT AMADEUS HEATH, Esq.
WILLIAM TETLOW HIBBERT, Esq.
WILMOT HOLLAND, Esq.
EGERTON HUBBARD, Esq.
NEVILE LUBBOCK, Esq.
GEORGE FORBES MALCOLMSON, Esq.
LORD JOSCELINE WM. PERCY.
CHARLES ROBINSON, Esq.
SAMUEL LEO SCHUSTER, Esq.
ERIC CARRINGTON SMITH, Esq.
JOSEPH SOMES, Esq.
WILLIAM WALLACE, Esq.
CHARLES BARING YOUNG, Esq.

Medical Referee—SAMUEL SOLLY, Esq., F.R.S.

FIRE, LIFE, and MARINE ASSURANCES on Liberal Terms.

FIRE DUTY.—This Tax having been abolished, the PREMIUM is NOW the only charge for FIRE INSURANCES.

Life Assurances with or without participation in Profits.

Divisions of Profit every **Five Years.**

Any sum up to £15,000 insurable on the same Life.

The Corporation bear the cost of Policy Stamps and Medical Fees.

A liberal participation in Profits, with the guarantee of a large invested Capital-Stock, and exemption, under Royal Charter, from the Liabilities of Partnership.

The advantages of modern practice, with the security of an Office whose resources have been tested by the experience of **nearly a Century and a half.**

A Prospectus and Table of Bonus will be forwarded on application.

ROBERT P. STEELE, *Secretary.*

The Reversionary Bonus on British Policies has averaged nearly 2 *per cent. per annum* upon the sum assured.

MUTUAL LIFE ASSURANCE.

SCOTTISH PROVIDENT INSTITUTION.

EDINBURGH—6, ST. ANDREW SQUARE.
LONDON—18, KING WILLIAM STREET, E.C.

In this Society alone, Members can assure with right to Share in Whole Profits at Moderate Premiums.

In other offices they may assure at rates as low, but without any prospect of additions; or they may obtain the right to profits, but only by payment of excessive rates.

TRANSFER OF ASSURANCES.

From its very Moderate Rates this Society is peculiarly suited to the case of those who may have reasons for discontinuing their policies and assuring afresh in an office of undoubted stability. Even after several years this may be effected without much (if any) pecuniary loss.

REALISED FUNDS, from accumulation of Premiums alone, above £1,500,000—the increase in 1868 being no less than £133,000.

SUBSISTING ASSURANCES, £6,500,000.

For full Information as to INVESTMENTS see the Annual Reports, of which copies may be had on application.

The "Insurance Register" (Kent and Co., London) gives inquirers the means of judging as to the FINANCIAL POSITION *of the various offices. The facts there brought together show that no office gives evidences of greater progress or stability than the* SCOTTISH PROVIDENT INSTITUTION.

NATIONAL LIFE ASSURANCE SOCIETY,

2, KING WILLIAM STREET, LONDON, E.C.

ESTABLISHED 1830.

Directors.

President—JAMES BOGLE SMITH, Esq. *Vice-President*—RALPH RICARDO, Esq.

GEORGE BURNAND, Esq. | GEORGE NICHOLAS, Esq.
JOSEPH COLLING, Esq. | HENRY POLLOCK, Esq.
THOMAS CURTIS, Esq. | SIGISMUND RUCKER, Esq.
THOMAS HENRY DAKYNS, Esq. | HENRY SEWELL, Esq.
RICHARD GARTH, Esq., Q.C. | Hon. GERALD C. TALBOT.

Auditors.

LEWIS C. BERGER, Esq. | JOHN CARLYON HUGHES, Esq. | WM. JOHN WHYTE, Esq.

Medical Officers—HERBERT DAVIES, M.D., 23, Finsbury Square; J. SCOTT, M.D., 8, Chandos Street, Cavendish Square.

Bankers—Messrs. ROBARTS, LUBBOCK, and Co.

Solicitors—Messrs. WILDE, HUMPHRY, WILDE, and BERGER.

Actuary—CHARLES ANSELL, Jun., Esq.

THIS MUTUAL SOCIETY divides its profits every year, and all Members' Policies upon which Five full Yearly Premiums have been paid are entitled to participate therein, either by a reduction of the Premium for the current year, or by an equivalent Reversionary Addition to the Sum Assured.

The Reduction in Members' Premiums for the Year ending 24th March, 1870, is at the rate of £45 per cent.; a Premium of £50 per annum is thus reduced to £27 10s. for the current Year.

November, 1869. FREDERICK LOCK, *Manager and Secretary*.

THE NATIONAL REVERSIONARY INVESTMENT COMPANY,

INSTITUTED 1837,

For the Purchase of Absolute or Contingent Reversions, Life Interests, and Policies of Assurance on Lives.

OFFICE—No. 63, OLD BROAD STREET, LONDON, E.C.

JOHN PEMBERTON HEYWOOD, Esq.—*Chairman.*
EDWIN WARD SCADDING, Esq.—*Deputy-Chairman.*

Forms for submitting Proposals for Sale may be obtained at the Offices of the Company. G. A. RENDALL, *Secretary.*

ROBERT COCKS and CO.'S NEW MUSIC.

HAMILTON'S MODERN INSTRUCTIONS for the PIANO. 702nd Edition. 70 large folio pages. 4*s*. Order of all musicsellers and booksellers, and of the publishers.

CLARKE'S CATECHISM of the RUDIMENTS of MUSIC. 125th Edition. Free by post 13 stamps. "Every child learning music should have this book."—*Morning Chronicle.*

THE HOLY FAMILY: Sacred Pieces by the most celebrated Composers. Arranged by W. H. CALLCOTT. Piano solos, 12 books, each 5*s*. The same, as piano duets, 6*s*. each. Flute, violin, and violoncello accompaniments, each 1*s*. All at half price, with an extra stamp for postage.

To all Teachers of Music.—Robert Cocks and Co.'s Green Catalogue of Popular Pianoforte and Vocal Music. Latest Addenda gratis and post free.

LONDON: NEW BURLINGTON STREET.

NEW WORKS NOW READY.

AUSTIN'S LECTURES ON JURISPRUDENCE: or, The Philosophy of Positive Law. *Revised Edition.* By ROBERT CAMPBELL. 2 vols. 8vo. 32*s.*

RESEARCHES IN THE HIGHLANDS OF TURKEY. In parts little visited of Albania, Montenegro, &c. With Notes on the Classical Superstitions of the Modern Greek. By Rev. H. F. TOZER, M.A. With Map and Illustrations. 2 vols. Crown 8vo. 24*s.*

A SMALLER HISTORY OF ENGLISH LITERATURE, with SPECIMENS from the Chief Writers, arranged Chronologically, from the Earliest Times to the end of the Georgian era. Edited by WILLIAM SMITH, LL.D. 2 vols., 16mo. 3*s.* 6*d.* each.

THE NORTHERN CATHEDRALS OF ENGLAND, including YORK, RIPON, DURHAM, CARLISLE, CHESTER, and MANCHESTER. By R. J. KING, B.A. With 60 Illustrations. 2 vols. Crown 8vo. 21*s.*

THE ROYAL ENGINEER AND THE ROYAL ESTABLISHMENTS AT WOOLWICH and CHATHAM. By the Right Hon. Sir FRANCIS B. HEAD, Bart. With Illustrations. 8vo. 12*s.*

MOLECULAR AND MICROSCOPIC SCIENCE. By MARY SOMERVILLE. With 180 Illustrations. 2 vols. Post 8vo. 21*s.*

A MEMOIR OF JOHN CONOLLY, M.D., D.C.L., comprising a Sketch of the Improved Treatment of the Insane in Europe and America. By Sir JAMES CLARK, Bart., K.C.B., M.D., F.R.S. With a Portrait. Post 8vo. 10*s.* 6*d.*

THE PARKS, PROMENADES, AND GARDENS OF PARIS; described and considered in relation to the wants of our Own Cities, and of Public and Private Gardens. By W. ROBINSON, F.L.S. With 400 Illustrations. 8vo. 18*s.*

NAPOLEON AT FONTAINEBLEAU AND ELBA. Being a Journal of Occurrences and Notes of Conversations, &c. By the late Major-General Sir NEIL CAMPBELL, C.B. Portrait. 8vo. 15*s.*

CONSTITUTIONAL PROGRESS. A Series of University Lectures at Oxford. By Professor BURROWS, M.A. Post 8vo. 6*s.* 6*d.*

ANNALS OF ST. PAUL'S CATHEDRAL. By HENRY HART MILMAN, D.D., late Dean of St. Paul's. *Second Edition.* Portrait and Illustrations. 8vo. 18*s.*

THE CONTINUITY OF SCRIPTURE, as declared by the Testimony of our Lord and of the Evangelists and Apostles. By Lord HATHERLEY. *Fourth Edition.* Post 8vo. 6*s.*

[*Continued.*

NEW WORKS NOW READY—*continued.*

LIVES OF LORD LYNDHURST AND LORD BROUGHAM. By the late Lord CAMPBELL. 8vo. 16*s.*

THE WARRIORS OF THE 17TH CENTURY WHO HAVE COMMANDED FLEETS AND ARMIES BEFORE THE ENEMY. By Gen. Sir EDWARD CUST, D.C.L. 2 vols. Post 8vo. 18*s.*

TRAVELS AND ADVENTURES IN RUSSIAN AMERICA. By FREDERICK WHYMPER. Map and Illustrations. 8vo. 16*s.*

THE MILITARY FORCES OF THE CROWN; their Administration and Government. By CHARLES M. CLODE. 2 vols. 8vo. 42*s.*

THE BRITISH MISSION TO ABYSSINIA. With Notices of the Countries traversed from Massowah, through the Soodan, and back to Annesley Bay, from Magdala. By HORMUZD RASSAM. Map and Illustrations. 2 vols. 8vo. 28*s.*

REMINISCENCES OF ATHENS AND THE MOREA during Travels in Greece, in 1839. By the late EARL OF CARNARVON. Edited by the present Earl. With Map. Crown 8vo. 7*s.* 6*d.*

THE NILE AND ITS BANKS, showing their attractions to the Archæologist, Naturalist, and General Tourist. By Rev. A. C. SMITH. Woodcuts. 2 vols. Post 8vo. 18*s.*

A RESIDENCE IN BULGARIA; or, Notes on the Resources and Administration of Turkey, the Condition and Character of the Christian and Mussulman Populations. By Capt. ST. CLAIR and C. A. BROPHY. 8vo. 12*s.*

TRAVELS IN THE EASTERN ARCHIPELAGO, 1865–6. A Popular Description of the Islands, their Natural History and Geography. By ALBERT S. BICKMORE, F.R.G.S. With Map and Illustrations. 8vo. 21*s.*

SHIPBUILDING IN IRON AND STEEL; a Practical Treatise giving Full Details of Construction, Processes of Manufacture and Building Arrangements. By E. J. REED, C.B. With 5 Plans and 250 Woodcuts. 8vo. 30*s.*

PRINCIPLES AT STAKE: a Series of Essays on Church Questions of the Day. By various Authors. Edited by G. H. SUMNER, M.A. *Second Edition.* 8vo. 12*s.*

THE STRENGTH OF IRON AND STEEL. By KNUTT STYFFE, Director of the Institute at Stockholm. With Plates. 8vo. 12*s.*

LAST WINTER IN THE UNITED STATES. By Rev. F. BARHAM ZINCKE. Post 8vo. 10*s.* 6*d.*

JOHN MURRAY, ALBEMARLE STREET.

JOHNSON'S DICTIONARY BY DR. R. G. LATHAM.

NOW READY,

Complete in FOUR VOLUMES, *4to. Price £7, bound in cloth and lettered,*

A DICTIONARY
OF
THE ENGLISH LANGUAGE.

BY

ROBERT GORDON LATHAM, M.A., M.D., F.R.S., &c.

Late Fellow of King's College, Cambridge; late Professor of English, University College, London; Author of 'The English Language,' etc.

FOUNDED ON THAT OF DR. SAMUEL JOHNSON, AS EDITED BY THE REV. H. J. TODD, M.A.

WITH NUMEROUS EMENDATIONS AND ADDITIONS.

'DR. LATHAM'S work is not only an English Dictionary in the strict meaning of the term, but in many important respects a very valuable addition to our national lexicography. Though nominally based on JOHNSON'S Dictionary, so much of the original text is discarded as imperfect or erroneous, and the additions in every department are so numerous and extensive, that it may be regarded virtually as a new book. Still, while thus amplifying and improving the original work until its form can no longer be recognised, Dr. LATHAM remains faithful in the main to its general spirit and plan, and his new Dictionary may fairly be said to possess many of the characteristic excellencies and defects of the old. . . . The Dictionary deserves to be studied by every one interested in the language, and as a book of reference is admirably fitted for general usefulness.'—*Edinburgh Review.*

'This Dictionary maintains its character as the most complete and able work of the kind published in this country. As an ordinary book of reference it fulfils all the requisite functions of a lexicon; but to the student and the scholar its great value lies in the philosophical dissertations on the logical value of words, and the vast amount of care and learning with which the derivations are exemplified. To those who take an interest in the science of the filiation of languages the importance of a dictionary on so comprehensive a plan cannot be overrated.'—*Morning Star.*

'The special excellence of the present over all previous editions will be found, no doubt, in the etymological department, which replaces the incorrect and often fanciful derivations of Dr. JOHNSON'S day with the more accurate conclusions, especially in the derivations from Teutonic and Scandinavian roots, to which the best modern philologists have advanced their knowledge. It also replenishes the vocabulary with newly-coined and technical words which have lately come into fashion; and revises and fortifies the original authorities with examples from more recent and living writers. In most instances, too, the exact reference is added to the extracts quoted. The Editor's explanatory preface is very interesting and instructive.'—*John Bull.*

LONDON: Longmans and Co.; W. Allan and Co.; Aylott and Co.; Bickers and Son; W. and T. Boone; L. Booth; T. Bosworth; E. Bumpus; S. Capes; J. Cornish; Hatchard and Co.; J. Hearne; E. Hodgson; Houlston and Wright; J. Murray; D. Nutt; Richardson and Co.; J. and F. H. Rivington; Smith, Elder, and Co.; Stevens and Sons; Whittaker and Co.; Willis and Sotheran; G. R. Wright.

EDINBURGH: Maclachlan and Stewart.

Editions adapted for the Knapsack or Travelling Bag, appropriate for Reading in the Holidays.

THE STUDENT'S EDITION:—

LORD MACAULAY'S CRITICAL AND HISTORICAL ESSAYS. Contributed to the "Edinburgh Review." New edition, complete in one volume. Crown 8vo., price 6*s.* cloth. 12*s.* in tree-calf; or 15*s.* morocco, gilt edges (*bound by Rivière*).

Also, uniform with the above:—

THE REV. SYDNEY SMITH'S MISCELLANEOUS WORKS, including his contributions to the "Edinburgh Review." New Edition, complete in one volume. Crown 8vo., price 6*s.* cloth; or 12*s.* bound in tree-calf by Rivière.

THE LIFE AND LETTERS OF THE REV. SYDNEY SMITH. Edited by his Daughter, Lady HOLLAND, and Mrs. AUSTIN. New edition, complete in one volume. Crown 8vo., price 6*s.* cloth; or 12*s.* bound in tree-calf by Rivière.

THE WIT AND WISDOM OF THE REV. SYDNEY SMITH; a Selection of the most memorable Passages in his Written Works, Letters, and Conversation. New Edition. Crown 8vo., price 3*s.* 6*d.* cloth.

London: LONGMANS, GREEN, & Co., Paternoster Row.

WORKS RECENTLY PUBLISHED BY

WILLIAM RIDGWAY, 169, PICCADILLY, W.

I.

THE CHARGE OF THE LORD CHIEF JUSTICE of England, in the case of the Queen against Nelson and Brand. One volume, 8vo., price 4*s.*

II.

NATIONALITY; OR, THE LAW RELATING TO Subjects and Aliens. By the Right Hon. Sir ALEXANDER COCKBURN, Lord Chief Justice of England. One vol., 8vo., price 5*s.*

III.

SINCLAIR ON GRASSES; a new and cheaper edition, in one volume, 8vo., with forty-five plates, price 15*s.*

IV.

PICTURES OF HUNGARIAN LIFE; a Handbook for Travellers in Western Hungary. By the Author of "Gheel," &c. One volume, crown 8vo., price 10*s.* 6*d.* Illustrated by the Author.

V.

GARDENING FOR THE COTTAGE. By S. WOOD. Price One Shilling.

WILLIAM RIDGWAY, 169, PICCADILLY, W.,
AND ALL BOOKSELLERS.

LIST OF THE

ALMANACS

FOR THE YEAR 1870,

PRINTED FOR THE

COMPANY OF STATIONERS.

MOORE'S ALMANAC.

This very popular Almanac, which, besides the usual Calendar, contains a fuller account of the Eclipses and Astronomical phenomena of the Year than any publication of its class, was lately increased by several pages, giving Lists of the Members of the Government, the Houses of Parliament, and other useful information, to which is this year added a half-sheet containing a List of the Principal Fairs in England. Price 6*d*.

GOLDSMITH'S ALMANAC.

Elegant, useful, and portable, it is essentially adapted for the pocket, not only from its miniature size, but from its containing a vast amount of useful and valuable matter for occasional reference. Price 6*d*.

It is kept by all Booksellers in a variety of bindings, for Presents.

LADY'S AND GENTLEMAN'S DIARY.

Adapted, as its name imports, to both sexes, containing Papers and Questions contributed by some of the first mathematicians of the day, as well as Enigmas and Charades for the amusement of the curious in those matters, was lately increased by an additional sheet, giving Lists of the Members of the Government, the Houses of Parliament, and other useful information. Price 1*s*. 4*d*.

GILBERT'S CLERGYMAN'S ALMANAC AND WHITAKER'S CLERGYMAN'S DIARY, in cloth.

This Almanac contains a complete Calendar of the Festivals, &c., of the Church of England, with the Lessons appointed for every day in the year; a Diary of 90 pages for Memoranda; a complete List of the Dignified Clergy of each Diocese in England, Wales, Ireland, and the Colonies, with the official Armorial Bearings of each Archbishop and Bishop; a List of the Incumbents of London and of parishes within ten miles of London; of the officials of the Universities and Public Schools; of the Head Masters of Endowed Grammar Schools; a very complete Peerage, and other information interesting to the Clergy and Laity of England. Price 2*s*. 6*d*.

This Almanac, as well as the following, is to be procured in various bindings.

CLERICAL ALMANAC.

NOW CONSIDERABLY ENLARGED AND IMPROVED, contains, besides the customary contents of an Almanac, proper Lessons for every day in the year; Transfer Days at the Bank, &c.; Universities of Oxford, Cambridge, and London; Archbishops, Bishops, Deans, Archdeacons, Queen's Chaplains, &c.; Alphabetical Lists of the English, Scotch, and Irish Nobility, with their surnames; Epitome of Assessed Taxes, Stamp and Legacy Duties, &c. Price 9*d*.

BRITISH ALMANAC AND COMPANION.

In cloth. Price 4*s*.

THE BRITISH ALMANAC.

Containing the Calendar of Remarkable Days and Terms; Monthly Notices; Sunday Lessons; Meteorological Tables and Remarks; Astronomical Facts and Phenomena; Tables of the Sun, Moon, and Tides; with a Miscellaneous Register of Information connected with Government, Legislation, Commerce, and Education; and various useful Tables. Price 1*s*.

COMPANION TO THE ALMANAC.

A Year-Book of General Information for 1870 on Subjects connected with Mathematics, Geography, Fine Arts, Political Economy, Public Improvements, Legislation, Statistics, &c. Price 2*s.* 6*d.*

JOHN PARTRIDGE'S ALMANAC.

Devoted to an account of the Eclipses, movements of the Planets, Astronomical, Tide and other Tables, with an additional sheet, giving Lists of the Members of the Government, the Houses of Parliament, and other useful information. Price 9*d.*

STATIONERS' COMPANY'S SHEET ALMANAC.

On super-royal paper, equally adapted for the Counting-house and the Library, containing Lists of the chief Officers of State, Judges, Public Offices, London Bankers and Insurance Offices, with very copious Postal Information, is embellished with a VIEW OF DUBLIN FROM THE PARK. Price 2*s.* Proof Impressions of the Plate on thick paper may be had at 3*s.* each.

LONDON SHEET ALMANAC.

On thick drawing paper for the table. This elegant and unique little Almanac, containing much information, is also printed on a thin paper, to adapt it for binding in a variety of styles suited to all tastes and fancies. It is this year ornamented with a VIEW OF THE NEW METROPOLITAN MEAT MARKET. Price 6*d.*

WING'S SHEET ALMANAC.

A very useful Office and Counting-house Companion, printed in Black and Red. Price 6*d.*

VESTRY ALMANAC.

For Ecclesiastical and Parochial Purposes, printed on a large sheet; is intended to assist the CLERGY with reference to various periodical returns required of them, as well as to convey much useful information to Parochial Officers, Parish Clerks, and others. Price 6*d.*

COUNTY ALMANACS,

(PRICE SIXPENCE EACH),

With various useful TABLES, particularly adapted to each County, viz.:

Middlesex, Hertfordshire, Essex, Kent, Surrey, and Sussex.

Cornwall, Devonshire, Somersetshire, and Dorsetshire.

Gloucestershire, Worcestershire, Herefordshire, Monmouthshire, and South Wales.

Norfolk, Suffolk, Cambridgeshire, Ely, Huntingdonshire, and Bedfordshire.

Warwickshire, Northamptonshire, Leicestershire, Rutlandshire, Lincolnshire, Nottinghamshire, and Derbyshire.

Cheshire, Lancashire, Shropshire, Staffordshire, and North Wales.

Wiltshire, Hampshire, Oxfordshire, Berkshire, and Buckinghamshire.

Yorkshire, Durham, Northumberland, Westmoreland, and Cumberland

---

The STATIONERS' COMPANY'S ALMANACS are distinguished by *the Arms of the Company*, and by the words,—

"Printed for the COMPANY OF STATIONERS,

"And sold by JOSEPH GREENHILL, at their HALL,

"LUDGATE HILL, LONDON."

"Good words are worth much and cost little."—HERBERT.

Sixpence Monthly, Illustrated.

GOOD WORDS.

EDITED BY NORMAN MACLEOD, D.D.,

ONE OF HER MAJESTY'S CHAPLAINS.

ARRANGEMENTS FOR 1870.

The Publishers beg to announce that they have made arrangements for the following important Works appearing in GOOD WORDS next year:

I.

DAYS IN UPPER INDIA.

By NORMAN MACLEOD, D.D.

To be begun in January, and continued throughout the Year.

II.

FERNYHURST COURT.

A New One Volume Story.

By the Author of 'Stone Edge.'

To be begun in May, and continued till completed.

III.

VISITS to the VAUDOIS and the CAMISARDS.

By S. SMILES, Author of 'Self Help.'

To be begun in January, and continued throughout the Year.

IV.

A SERIES OF TWELVE PAPERS.

By the Rev. W. FLEMING STEVENSON, Author of 'Praying and Working.'

To be begun in January, and continued throughout the Year.

V.

'GOOD WORDS' LECTURES IN SCIENCE.

By Eminent Authors.

To be begun in January, and continued throughout the Year.

VI.

DOROTHY FOX.

A New Three Volume Story.

By the Author of 'How it all Happened.'

To be begun in January, and continued throughout the Year.

VII.

WORKING PEOPLE, and How they Live.

By 'GOOD WORDS' COMMISSIONER.

To be begun in January, and continued throughout the Year.

VIII.

CARLINO.

A New One Volume Story.

By the Author of 'Doctor Antonio.'

To be begun in January, and continued till completed.

IX.

LETTERS FROM THE TROPICS.

By CHARLES KINGSLEY, Author of 'Westward, Ho!'

To be begun in March, and continued till the end of the Year.

In addition to the above, there will also be Contributions by many of the other Authors whose contributions have raised 'GOOD WORDS' to its high position.

STRAHAN & CO., PUBLISHERS.

LIST OF WORKS

ON

ASSURANCE (LIFE, FIRE, AND MARINE), ANNUITIES FRIENDLY AND BUILDING SOCIETIES, &c.,

PUBLISHED BY

CHARLES AND EDWIN LAYTON,

Booksellers and Printers,

FLEET STREET AND GOUGH SQUARE, LONDON.

RICHARD ATKINS (of the Sun Fire Office).

THE AVERAGE CLAUSE. Hints on the Settlement of Claims for Losses by Fire under Mercantile Policies. Crown 8vo., pp. 108, cloth, 5*s*.

W. DOWNING BIDEN, F.G.S.

I.

RULES, FORMULÆ, AND TABLES FOR THE VALUATION OF ESTATES, whether Freehold, Copyhold, or Leasehold, in Possession or in Reversion, and dependent on Terms of certain duration or on a Life or Lives; with New Rules and Tables for ascertaining the correct market value or fair price to be given for Annuities, Reversions, Advowsons, and Next Presentations, in order to secure to the purchaser a certain rate of interest on equitable terms; and a Set of Conversion Tables, for ascertaining from the price of an Annuity the cost of a Reversion, to allow the purchaser a given rate of interest with security. *Second Edition.* Demy 8vo., cloth, 12*s*.

II.

PRACTICAL RULES FOR VALUERS, with Notes on the Valuation of Freeholds, Leaseholds for Lives or for Years, Copyholds, Advowsons, and Next Presentations; also on Claims for Compensation for Property taken or damaged by the Construction of Railways or other Public Works. *Third Edition.* Fcap. 8vo., sewn, 1*s*. 6*d*.

MORRICE A. BLACK.

I.

A CHRONOLOGICAL AND STATISTICAL CHART OF THE LIFE ASSURANCE ASSOCIATIONS ESTABLISHED IN THE UNITED KINGDOM, from 1706 to 1863; showing where they were and how they disappeared. Mounted in cloth case. 16*s*.; or on Roller, 21*s*.

II.

AN ANALYSIS OF MARINE INSURANCE COMPANIES' ACCOUNTS, showing the Losses, Liabilities, and Assets; together with a Table illustrating the combined experience of Twelve Offices. Demy 8vo. sewn, pp. 24. 3*s*. 6*d*.

WILLIAM BRINTON, M.D. (The Late).

ON THE MEDICAL SELECTION OF LIVES FOR ASSURANCE. Fourth Edition. By Dr. Harley. Fcap. 8vo. cloth, 2*s*.

CHARLES JOHN BUNYON, M.A. (Barrister-at-Law).

I.

THE LAW OF FIRE INSURANCE. 8vo. cloth, pp. 291, 16*s*.

II.

THE LAW OF LIFE ASSURANCE, including the Formation, Constitution, and Amalgamation of Assurance Companies, Assignments and Equitable Liens arising in connection with Life Policies, and an Introductory Chapter on the Amendment of the Law. Second Edition. Demy 8vo. cloth, pp. 606, 30*s*.

[*Continued.*

LAYTONS' LIST OF WORKS—*continued.*

DAVID CHISHOLM.

COMMUTATION TABLES; for Joint Annuities and Survivorship Assurances, for every Combination of Two Lives, according to Carlisle Mortality at 3, 3½, 4, 5, and 6 per Cent. Interest; with Tables of Annuities and Assurances on Single Lives, and other useful Tables. 2 vols. super royal 8vo., 4*l.* 4*s.*

GRIFFITH DAVIES, F.R.S.,

Late Actuary to the Guardian Assurance Company, and to the Reversionary Interest Society.

TREATISE ON ANNUITIES, with numerous Tables based on the Experience of the Equitable Society and on the Northampton Rate of Mortality. Demy 8vo., boards, 1*l.* 6*s.*

OLINTHUS GREGORY DOWNES, F.R.A.S.

TRANSLATION OF QUETELET'S LETTERS ON THE THEORY OF PROBABILITIES, as applied to the Moral and Political Sciences. 8vo., cloth, 12*s.*

LARGE OR SMALL PARCELS OF BOOKS PURCHASED OR TAKEN IN EXCHANGE.

Complete Catalogue to be had Post-free on application.

London: CHARLES & EDWIN LAYTON, 150, Fleet Street.

Just Published, in 8vo., price 18*s.*,

THE ANNUAL REGISTER;

A Review of Public Events at Home and Abroad, for the Year 1868; being the Sixth Volume of an improved Series.

The Volumes for 1863 to 1867 are still to be had, price 18*s.* each.

LONDON: RIVINGTONS, WATERLOO PLACE;

AND THE OTHER PROPRIETORS.

DR. ROBERTS'S CELEBRATED OINTMENT, called

"THE POOR MAN'S FRIEND,"

Is confidently recommended to the public as an unfailing remedy for wounds of every description; a certain remedy for ulcerated sore legs, burns, scalds, bruises, chilblains, scorbutic eruptions, and pimples in the face, sore and inflamed eyes, sore heads, sore breasts, piles, &c. Sold in pots 13½*d.*, 2*s.* 9*d.*, 4*s.* 6*d.*, 11*s.*, and 22*s.* each.—And his

PILULÆ ANTI-SCROPHULÆ, OR ALTERATIVE PILLS,

Proved by sixty years' experience to be one of the best alterative medicines for purifying the blood and assisting nature in her operations. They form a mild and superior family aperient, that may be taken at all times without confinement or change of diet. Sold at 13½*d.*, 2*s.* 9*d.*, 4*s.* 6*d.*, 11*s.*, and 22*s.* each.

PREPARED ONLY BY

BEACH & BARNICOTT, Bridport, Dorset,

AND SOLD BY ALL MEDICINE VENDORS.

BOND'S GENUINE INDELIBLE MARKING INK,

Without preparation, which is warranted to possess the highest state of Chemical Durability: a perfect preventive from any loss of Wearing Apparel by fraud, mistake, or otherwise. In bottles 1*s.* or 6*d.* each; also in pedestal and flat cases, 1*s.* or 6*d.*

Manufactured and sold by H. BOND, Pharmaceutical Chemist, 11, Cross Street, Nile Street, Hoxton New Town. *Established* 1815. *A Liberal discount allowed to Wholesale Houses.*

C. & E. LAYTON, Wholesale Agents, Fleet Street, London.

5

11

The Toilet.

A due attention to the Gifts and Graces of the Person, and a becoming preservation of the advantages of nature are of more value and importance, with reference to our health and well-being, than many parties are inclined to suppose. Several of the most attractive portions of the human frame are delicate and fragile, in proportion as they are graceful and pleasing; and the due conservation of them is intimately associated with our health and comfort.

The Hair,

for example, from the delicacy of its growth and texture, and its evident sympathy with the emotions of the mind;

The Skin,

with its intimate relation to the most vital of our organs, as those of respiration, circulation, and digestion, together with the delicacy and susceptibility of its own texture; and

The Teeth,

also, from their peculiar structure, formed, as they are, of bone or dentine, and cased with a fibrous investment of enamel; these admirable and highly essential portions of our frames are all to be regarded, not merely as objects of external beauty and display, but as having an intimate relation to our health, and the due discharge of the vital functions. The care of them ought never to be entrusted to ignorant or unskilful hands; and it is highly satisfactory to point out as protectors of these vital portions of our frame the preparations which have emanated from the laboratories of the Messrs. Rowlands', their unrivalled MACASSAR for the Hair, their KALYDOR for improving and beautifying the Complexion, and their ODONTO for the Teeth and Gums.

GREAT CAUTION is necessary as to where proprietary articles are purchased, particularly those with reference to the Toilet. Shopkeepers of small repute offer for sale their spurious and pernicious imitations of proprietary articles, under the lure of being cheap, regardless of the consequences. ROWLANDS' TOILET REQUISITES, their Macassar Oil, Kalydor, and Odonto, are peculiarly the subjects of these innovations.—*Morning Paper.*